ISASC

EQUILIBRIUM®

QUARTERLY MAGAZINE OF THE INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

2012 ISSUE NO. 1

PAGES 3769 - 3796

Cover Picture

The scale is engraved on the beam *Parkins & Gotto* and *Oxford St W*. Parkins and Gotto were stationers and were retailers of this scale. The scale was undoubtedly made by the renowned S Mordan & Co. as the rope edging around the base and weight tray are indicative of his work.

The scale has beautiful gilded brass oval letter plates, base and pillar which are intricately engraved and inlaid with enamel. The scale comes complete with 5 original enameled weights which sit in a circular weight recess. The complete set of gilded poises are marked 4 oz, 2 oz, 1 oz, ½ oz and ½ oz. The scale's base measures 7" by 5" and it stands 7" tall.

Peter Laycock Collection

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ISASC
INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

EQUILIBRIUM is published quarterly in February, May, August and November.
© 2012 International Society of Antique Scale Collectors ISSN: 0893-2883

International Society of Antique Scale Collectors
Founded September 1976
Internal Revenue Service 501 (c) (3) EIN 36-2976411
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Published with the co-operation and support of
ISASC Europe
Founded October 1993

Charity commissioners for England & Wales No 1037558
www.isasce.com

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How Reliable is that “Reliable” Egg Scale?

BY CHARLEY AMSBAUGH

“Reliable” is one of those brand names that people choose because it evokes the idea that this is a product you can count on, something that will work well and last a long time. As a result, there are lots of products marketed under that same name. Was your “Reliable” Egg Scale made in the United States or Australia? Los Angeles, California, or Quincy, Illinois? And, how do you tell the difference?

Reliable of Los Angeles

Some of these products, like the three-generation “Reliable Egg Scale” made in Los Angeles and shown here (Figure 1), were made by the same company, the Reliable Manufacturing Company, which later became the Reliable Manufacturing Division of the James Manufacturing Company. The first generation had a wooden base, while the second and third generations were all metal. All three generations were “notched out” at both ends to fit onto a wooden egg crate while sorting the eggs.

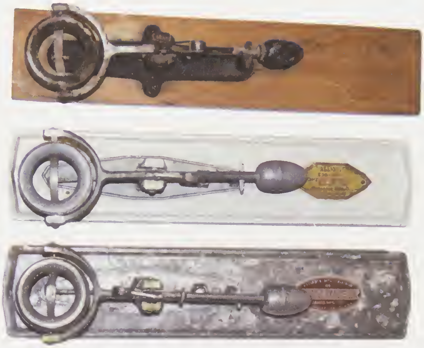


Fig. 1. Top: First Generation, wooden base.
Center: Second Generation, tin base.
Bottom: Third Generation, galvanized tin base.

First Generation: As one might expect, the first generation Reliable Egg Scale (wooden base) underwent a number of evolutionary changes from 1923, when production first began, until the design stabilized in the early 1930s. The earliest known model of the Reliable Egg Scale (Figure 2) featured a weight which hung from a round bail, not a hook, and slid across the beam between two notches, the first for 18 oz. and the second for 22 oz. per dozen; it sold for $3.50. (NOTE: Unlike all other known models, this earlier model did not have the characteristic Reliable “flip weight.”) The second model (Figure 3) also was designed for grading eggs that weighed 18 and 22 oz. per dozen, but this time, the choice was made by flipping a “shift weight” toward the egg cup for 18 oz. and away from the egg cup for 22 oz. per dozen.

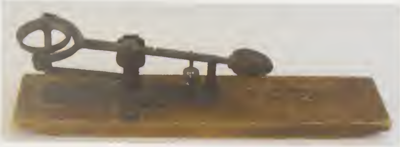


Fig. 2. Earliest model – Sliding Weight.

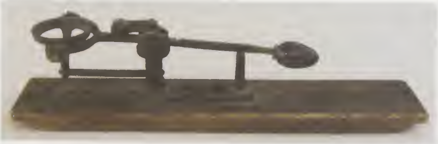


Fig. 3. Next Model – First Flip Weight.

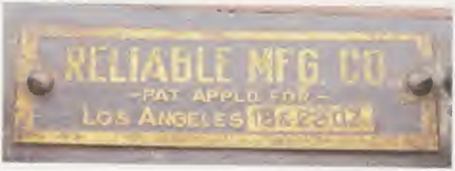


Fig. 4. Metal Label.

RELIABLE MFG. CO
-PAT. APPLD. FOR-
LOS ANGELES 18&22 OZ.

This shift weight was a permanent feature of Reliable Egg Scales made in Los Angeles from that point on, but was referred to as a “flip weight” in documentation associated with the second (brass name plate) and third (red and silver name plate) generations. Both these first two models had a metal plate which read, "RELIABLE MFG. CO., PAT APPLD FOR, LOS ANGELES, 18 & 22 OZ." riveted to the top of the metal base under the notches on the balance beam (Fig.4). The balance beams and egg cups of both these models were made of pot metal.

Once the Reliable Egg Scale went into full production, additional weighing choices (Figure 5) could be exercised with all three generations of the Reliable Egg Scale by placing the small hook weight that came with each scale in the notch and flipping the shift weight over it for 24 oz. per dozen. A large hook weight also was available to weigh larger eggs by flipping the "flip weight" toward the egg cup for extra large (27 oz. per dozen) and away from the egg cup for jumbo (30 oz. per dozen) eggs. Ring (or peewee) weights for grading eggs that weighed 15-, 16-, or 17-oz per dozen, and 18 or 20 oz. to the dozen Reliable Mfg Co. test weights to calibrate the scale, also were included. Scales could be calibrated by turning the counterweight at the end of the balance beam to move it closer to or further away from the egg cup at the opposite end of the beam. These test weights and the large hook weights are becoming increasingly difficult to find.

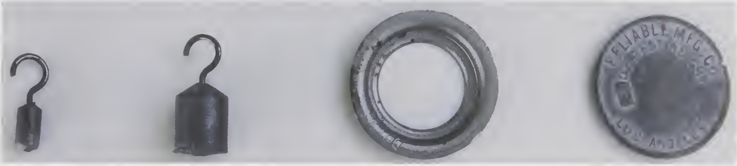


Fig. 5. (l-r): Small Hook Weight, Large Hook Weight, Ring Weight, Test Weight.

The metal base and fulcrum of all first-generation Reliable Egg Scales were made of cast iron. Material used for the balance beam and egg cup varied from pot metal to brass to steel, with pot metal carried forward through the second and third generations, presumably because of World War II restrictions on materials used to produce non-war products. However, there were no wartime restrictions in place when full-scale production began on the first generation Reliable Egg Scale. The balance beam of the first production model (Fig. 6) was made of brass, while steel was used for the later model (Fig. 7) of that same, wooden-based generation.

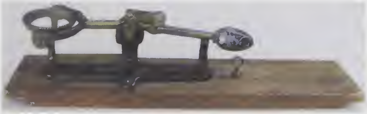


Fig. 6. First Generation Production - Early Model with Brass Balance Beam.

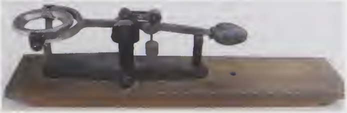


Fig.7. First Generation Production - Later Model with Steel Balance Beam.

The design of the egg cup also changed from the earlier to the later model of the first generation Reliable Egg Scale. The changes are most apparent when looking at the two egg cups from the bottom, as shown in Fig. 8. In 1940, the chicken version, "Reliable Egg Scale No. 402," was tested for 19 & 22 oz. per dozen and sold for $2.90. The turkey version, "Reliable Egg Scale No. 402-T," was tested for 30 & 34 oz. per dozen and sold for $3.25.

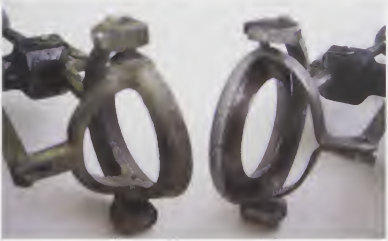


Fig.8. Compare the Egg Cups - Early Model on Left. Later Model on Right.

Second Generation: By comparison, except for the base, most of the metal parts used for the second generation and third generation Reliable Egg Scales are non-magnetic, some kind of pot metal. The base of the second generation Reliable Egg Scale (Figure 8) was made of sheet metal coated with tin. The sheet metal base of the third generation was also coated with tin at first, but later was galvanized to protect against rust. What I assume was the original price, $3.45, was written in pencil on the underside of one of my second generation Reliable Egg Scales. The second generation Reliable Egg Scale, which had a brass-colored name plate attached to the end of the base opposite the egg cradle, came with written directions. The entry "Reliable Mfg. Co., Los Angeles 33, Calif." appears at the bottom of those directions. Earlier models of the second generation Reliable Egg Scales were tested for 19 & 22 oz. per dozen, while later models were tested for 20 and 23 oz. per dozen, as the industry standard changed. Since postal zones, in this case "33", were used for large U.S. cities from 1943 through 1963, these directions indicate that the second generation of the Reliable Egg Scale was made during that period. The change from steel to pot metal for manufacturing the second generation is in keeping with wartime restrictions during World War II, which tracks with production in the early 1940s.

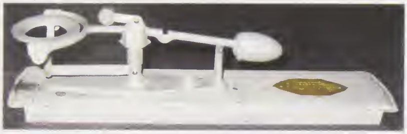


Fig. 8. Second Generation Reliable Egg Scale
Pot Metal, Brass Name Plate, Tin plated Base.

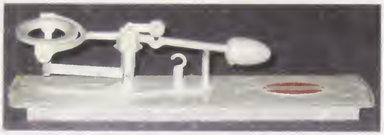


Fig. 9. Third Generation Reliable Egg Scale
Pot Metal, Red & Silver Metal Name Plate,
Galvanized Base.

Third Generation: The third generation Reliable Egg Scale (Figure 9) may have been made in the 1960s. It is similar in appearance to the second generation, but has a red and silver metal name plate attached to the end of the base opposite the egg cradle. The chicken version was tested for 21 & 24 oz. per dozen, and sold for $3.90. The turkey version, which was tested for 30 and 34 oz. per dozen, sold for $4.50. The directions that came with it included the entry "James Mfg. Co., Reliable Div., Los Angeles, Calif." Since the U.S. Postal System stopped using postal zones for large U.S. cities in 1963, when zip codes were adopted, the absence of a postal code in this entry implies that the third generation was produced in the early 1960s, perhaps beginning during the transition period between postal zones and zip codes. The absence of a zip code in the company's address in directions that were shipped with the third generation Reliable Egg Scale may have been a conscious decision to avoid having to reprint directions if that information changed again. None of the Reliable of Los Angeles egg scales ever looked as good as this artistic makeover of a second generation scale (Fig. 10).

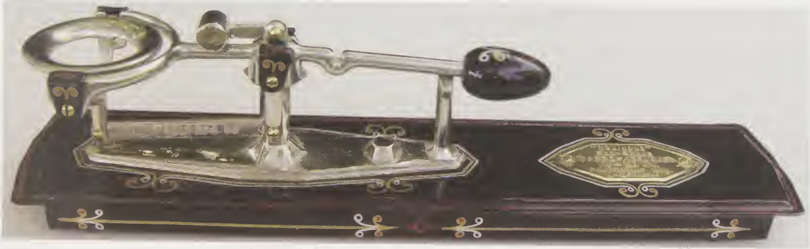


Fig. 10. Second Generation Artistic Makeover.

Reliable of Quincy, Illinois

The Reliable Mfg. Co. of Los Angeles was not the only egg-scale manufacturing company to use the word "reliable" for the products it made. In fact, there were at least two other egg scales made in the United States and one in Australia that were marketed under the "Reliable" name. The "Reliable Automatic Dial Egg Scale" shown here (Fig. 11) was made by the Reliable Incubator and Brooder Company of Quincy, Illinois. The scale is graduated from 16 to 40 oz. per dozen, sufficiently high to weigh either chicken or turkey eggs. It was marketed with, or without, an egg candler attached. No information has been found to indicate when this egg scale was invented or when production began. Advertising for this egg scale has been found as early as 1934.

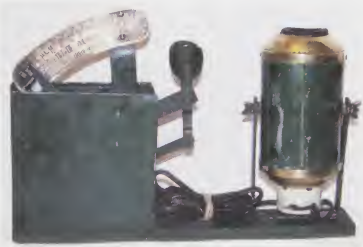
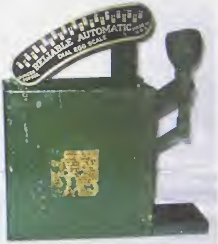


Fig. 11. ↘↗ Reliable Automatic Dial Egg Scale with Candler (left), or without (right)



Reliable Beam Egg Grading Scale

According to the paper instructions glued to its wooden base and shown to the right, the "Reliable Beam Egg Grading Scale" (Fig. 13) was intended for marketing in both Canada and the United States. An ad in the 1932 catalog published by the Brower Manufacturing Company of Quincy, IL, described this scale as having been adapted to U.S. and Canadian requirements. The Reliable Beam Egg Grading Scale features a brass egg holder on a brass bar balanced on a cast iron stand, which is mounted on a wooden base. A brass collar slides along the bar as a counterweight until it balances and reveals the weight of a dozen eggs of that size. The numbers 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 30, 32 oz. per dozen are embossed on top of the bar, with ½ oz. markings for the 22½ and 23½ oz. grades of Canada. The wooden base is notched out at the ends to fit onto a wooden egg crate while sorting the eggs. It should be noted that this first generation Reliable Beam

INSTRUCTIONS
FOR
Reliable Beam Egg Grading Scale

Figures on beam represent the grade in ounces to the dozen eggs of all the standard grades. The mark between 22 and 23 is the 22½ ounce grade, and the mark between 23 and 24 is the 23½ ounce grade of Canada.

To get the grade of an egg, the egg is placed in the egg holder, and the balance weight is moved out on the beam to a point where the egg just overbalances the weight. The number at this point indicates the grade (weight of one dozen eggs of that size).

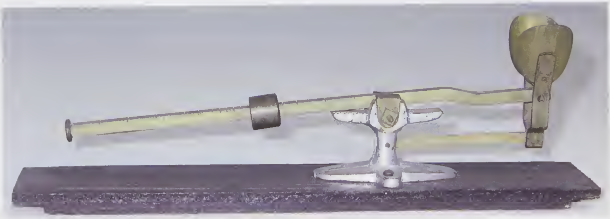


Fig. 13. ↘↘ Reliable Beam Egg Scale with wooden base.

Egg Grading scale is often found without its original wooden base. Two different versions of the instructions for the Reliable Beam Egg Scale, one shown in the box above, the other shown here, have been observed. Based on the shape of the egg holder, which is nearly identical to that of the Reliable Automatic Dial Egg Scale described above, the Reliable Beam Egg Grading Scale probably was made by the Reliable Incubator and Brooder Company of Quincy, IL. The Reliable Beam Egg Grading Scale was selling for $1.90 in 1932.

Catalog ads carried by the Brower Manufacturing Co. in 1932 (Figure 14) compared with ones carried by the Moore Brothers Corporation of Albany, NY, from 1933 through 1939 (Figure 15) indicate that two different models were made—the difference being the egg cradle. Although the later model with the spoon-shaped egg cradle must have been manufactured, since it was offered in catalog sales for at least 7 years, I have never seen or heard of one actually existing. Have you?

- - - - INSTRUCTIONS - - - -
--FOR--
RELIABLE BEAM EGG SCALE

To get the grade of an egg, the egg is placed in basket or holder and the balance weight set to grade desired. Those that do not overbalance the weight are thus graded out. The numbers on beam indicate weight of a dozen eggs of size egg being graded. The mark between 22 oz. and 23 oz. is the half ounce grade or 22½ oz., and the mark between 23 oz. and 24 oz. is the half ounce grade or 23½ oz.

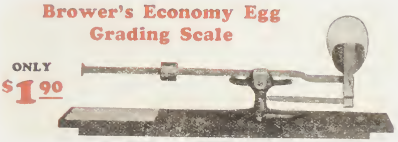

Brower's Economy Egg Grading Scale
ONLY
$1.90

Fig 14. ▲ ▲ Ad from Brower Catalog, 1932.

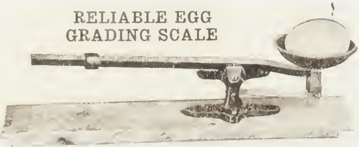

RELIABLE EGG GRADING SCALE

Fig 15. ▲ ▲ Ad from Moore Bros catalogs, 1933-1939.

Reliable of Australia

Finally, not to be outdone, our friends from Down Under produced their own "Reliable Egg Grader." The July 1934 edition of the "Poultry Farmer's Catalog", which was published by the "Poultry" Newspaper Trading Department in Sidney, Australia, carried an ad for a "Poultry's" Egg Grader (Fig. 16), which was specially made for that company.

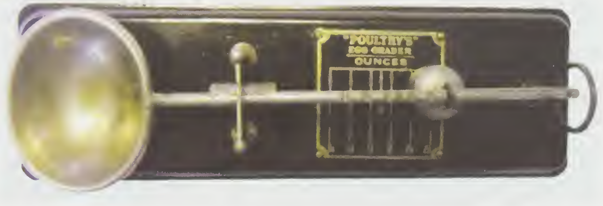


Fig. 16. ◄◄ "Poultry's" Egg Grader.

Egg Scales matching that design have been observed with two specialized labels, the "Poultry's" Egg Grader shown at left, and the "Reliable" Egg Grader shown below (Fig. 17 and 18).

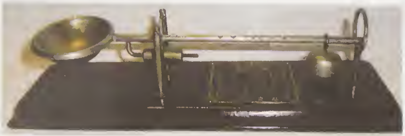


Fig. 17. ▲ ▲ Side view of Poultry's & "Reliable" Egg Grader. Photo complements of Barbara Tope.

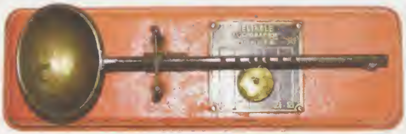


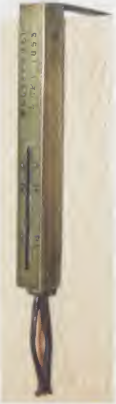
Fig. 18. ▲ ▲ Overhead view of "Reliable" Egg Grader.

Miniature Postal Scales

BY PETER LAYCOCK

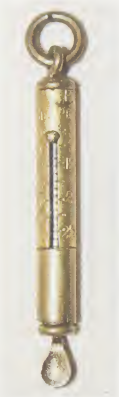
As a spin off of my interest in collecting postage stamps, I was drawn into the world of the scale collector, or more specifically the postal scale collector. Now, after some twenty years, I have assembled a collection of some 500 postal scales. I must however confess that, as parents have no favorites among their children, that is not the case when it comes to my postal scale collection. By far my favorites are the little guys, the miniatures.

As background, in 1840 the postage stamp was introduced in the United Kingdom. Up until that time, charges for mail were determined by the number of sheets and the distance traveled. With the advent of the postage stamp and the requirement to charge a postage fee based on the weight, there arose a need for postal scales. In late 1839 and early 1840, many such devises were introduced to the market. They came in all sizes. Larger ones were required for all post offices, however many smaller and often very decorative postal scales were designed for use in the home. It was not unusual for there to be a small postal scale, similar to the one shown here, on the desk in many homes in Britain from 1840 right up to the 1940s. But there was still another classification of postal scale that I have labeled the *miniatures*. These scales are generally two inches or smaller and are usually spring or pendulum scales. Often they were carried in a ladies' handbag or were placed on a necklace and worn as jewelry. These small scales have become very collectible and relatively hard to find.



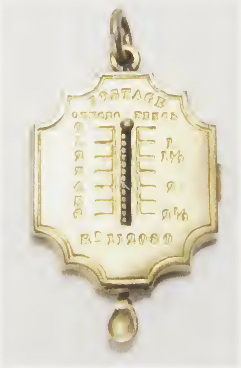
The first group that we will look at is the spring scale. These were typically made by the British and the Americans. However, there are two in this group that we will cover that were made by the French.

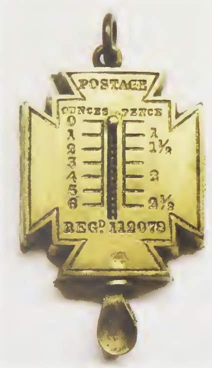
This first scale is very unique and extremely rare and is one of the earliest of my miniatures. It is a British spring scale that is designed to work if dangled over a flat surface. The small strip extending horizontally from the top of the scale is placed perhaps on a table edge; a weight of some sort would then be placed on it to keep it stationary. A letter then would be placed in the clip and the weight and rates could then be read. It is made from square tubular brass with a steel spring and letter clip and is marked *registered Sep 6, 1853*. It measures 2½ inches in length and the body is 7/16 inches thick. It displays only the postal rates with three graduations: 1d, 2d and 4d. It is known as *The Economic Letter Balance* and was registered by John Sheldon of Great Hampton St, Birmingham, September 1853. This tiny spring balance is the rarest of Sheldon's postal scales, and greatly desired by collectors who love tiny scales. Three examples are known to exist.

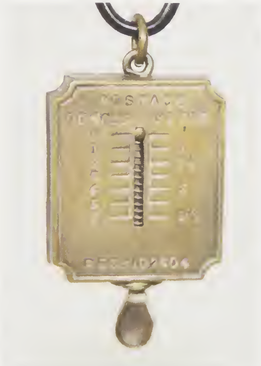


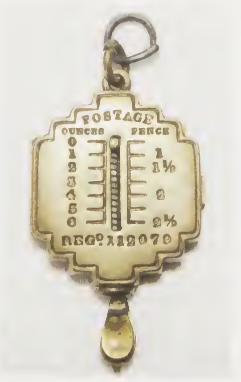
The smallest scale that I have found is British. It displays both the weight and the required postage on either side of the center slot. It weighs from 0 to 6 ounces, and the rates range from 1d for a weight up to 1 ounce to 2½d for 6 ounces. It is a tubular spring scale and when fully extended from ring to letter clip it is 1¾ inches long by 3/16 inches in diameter. The letter is attached to the small clip at the bottom. There is no maker's mark but there is a Registration number Rd105707 which was registered by John Ashwin of 24 Spencer Street, Birmingham, on August 3rd, 1888. John Ashwin was known as a *manufacturing jeweler*. The scale is nicely finished with a gold gilt. This scale was most likely worn as a piece of jewelry on a chain suspended around the neck. The postal rates reflect those used between 1870 and 1897.

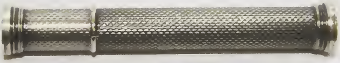
This lovely little antique gold gilt spring postal scale is also British. It measures from the ring to the letter clip 1¾ inches, is 1 inch wide and is ¼ inch deep. The numbers on the left of the indicator are for the weight and measures up to 6 ounces. The numbers on the right are for the postal rates and go up to 2½d. As with the scale above, there is no maker's mark, but there is a registration number Rd112080. The rates are those used during the period from 1870 to 1897. This scale also doubles as a stamp box. The back is hinged on the left and opens to receive small stamps of the day. The letter to be weighed is slipped into the clasp that hangs down from the bottom. At the back of the clasp is a small hook that small packages wrapped with string can be suspended from to determine their weight. This is one of four different designs of the same scale. These scales are very collectible and are quite rare. The most sought after of them is the one in the shape of the Maltese Cross. It has registration number REGd. 112078. These scales also double as a stamp box. The other two with registration numbers REGd 102604 and Rd 112079 are pictured here. It is likely that these four scales were also designed and manufactured by John Ashwin of Birmingham. They were probably marketed as unique pieces of jewelry to be adorned around the neck like a pendant.

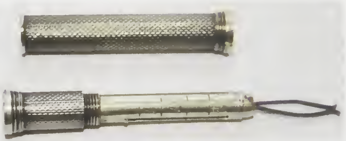




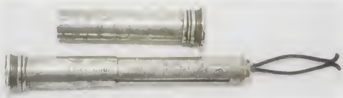


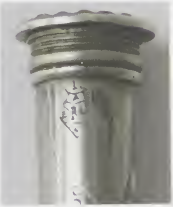






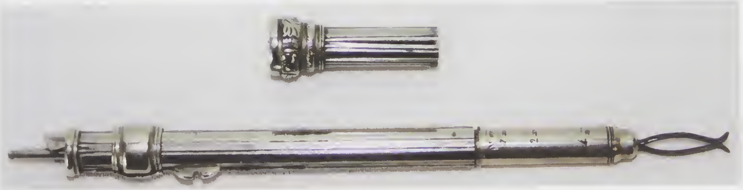
Small tubular postal scales suitable for ladies and gentlemen of the time to carry in their handbag or pocket became quite popular. This British miniature letter scale from the late 1800s is a small tubular spring scale. It is 2¼ inches long when closed and ¼ inch wide. When opened with the letter clip extended it is 2⅝ inches long. When not in use, the blued steel letter clip is folded back into a slot and recedes into the center of the tube. The bottom part of the tubular case is then reattached by turning onto the threads on the scale. On either side of the center slot are two measurement indicators. On the left, the weight in ounces from 0 to 4 in one ounce increments and on the right the postal rates of the day; in this case 1d, 1½d and 2d. These are the rates used between 1871 and 1897. There is no maker's mark but I expect it was made by John Sheldon II of Birmingham. This scale is very nicely made with a knurled effect on the side, on each end there is an inscription of a large engraved 'E' which could be used as a seal, if wax was used to seal the envelope. I would imagine that this little scale would be carried in a ladies handbag.

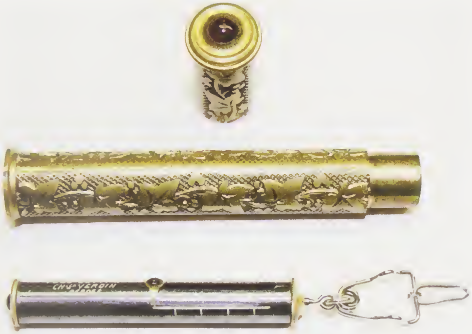




This next scale is very similar. It is slightly larger, 2½ inches when closed and 3¼ when open. The maker is John Sheldon II and it was made for the US market. It is marked *John Sheldon* and it has a British Diamond Registration mark, which tells us that it was made in May of 1871. It measures in increments of ½ ounce from 0 to 3. The rates are listed in cents in 5 cent increments from 0 to 30. Unlike the previous scale, the cover does not screw on, but simply slips over the lower and thinner part of the scale. One end has a checkered embossed design to be used in sealing the envelope when sealing wax is applied.

The third one is also made by John Sheldon I. It is a combination mechanical pencil/pen and postal scale. It is marked *John Sheldon 1184 APL 8 1842*. The scale works in a similar fashion to the other two. It measures 3¾ inches when closed and 4¼ when open. There is no indication of weight but the rates are engraved 1d, 2d and 4d, reflecting the rates that were established in 1840 with the issuance of the first postage stamp.

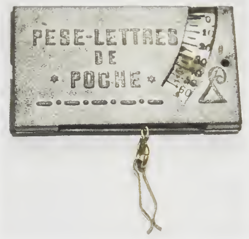




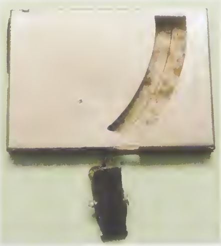
Next we have a very attractive French tubular postal scale. The scale is housed in a lovely brass capsule with what appears to be a pressed design. On the end of the end cap is a ruby-like stone or piece of glass. The scale itself is a spring scale in a grey anodized tube. On one end is the letter clip and on the other is another red stone similar to the one on the case. Marked on the scale is the following *Pése Lettres, CHles Verdin, Deposé*. The scale measures in increments of 15 grammes from 0 to 60. The length of the case when closed is 3¾ inches. Another fine example of the French penchant for artistry.

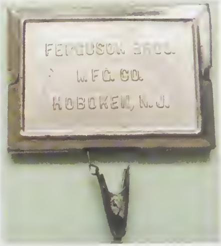
A number of sterling silver tubular scales have been introduced to the US market. Most of these were sold as pieces of jewelry. The first two are from the Berning collection. The first from the left has patent number 104499 and was issued a patent June 21, 1870 to A. S. Rice of New York and assigned to Vulcanite Jewelry Company. In the patent description Rice states, *My invention consists of a scale for weighing letters, constructed substantially as hereafter described, so that it may be hung on the watch-chain or guard as a 'charm' being not only useful as a convenient device for weighing letters, but also, ornamentation as an article of jewelry.* There is no maker's mark or patent number but is marked *10 & Sterling*. It measures 27/8 inches from the top of the ring to the bottom of the letter clasp, is ¼ inch in diameter and measures weight in increments of one ounce up to 8 ounces. No postal rates are indicated. The second and third scales are more decorative. They are 27/8 inches long and 3/8 inches in diameter and are marked *Sterling* with a stylized *A* and *17 & Sterling*. They measure weight in ounces from 0 to 8 and there are no postal rates. The last one is bigger than the rest and measures 4 inches from top to bottom, it measures in ounces from 0 to 3 and there are no postal rates. It is marked as follows: *Tiffany & Co. Sterling*.

This American tubular spring scale is perhaps more utilitarian than the others. It is made from nickel plated brass. It is 2 inches closed and 4 inches open and measures in ounces from 0 to 8. It is marked *Parkers Postal Scales and Pat. May 18 80*. The letter clasp is a split hook so that letters can be slipped into the hook, as well the hook serves to weigh small packages that may be wrapped in string.

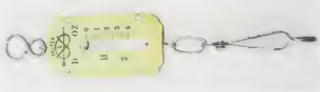


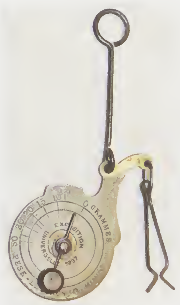
The French made this little spring scale. It is made from decorative folded sheet metal. The body has an embossed inscription both on the front and Back. On the front is *PÉSE-LETTRES de POCHE* (Pocket Letter Scale). The back has *J. ROGET 30 BD. DES CAPUCINES 30*. It is my assumption that J. Roget is a retailer of some sort and has used this letter scale as an advertising give away. Inside there is a spring metal strip to which is attached a chain and a letter clip that dangles through the bottom when held. The pointer indicating the weight is pulled down across the weight display as the letter is applied. It measures from zero up to 60 grammes in 5 gramme increments. It is $2\frac{1}{16}$ by $1\frac{3}{16}$ inches and is ¼ inch thick. A similar American scale is in the Berning collection. The rectangular chrome plated tin body measures $2\frac{3}{16}$ by $1\frac{9}{16}$ inches and is ¼ inch thick. It is 2½" from the top to the bottom of the letter clasp. This scale has a 12 ounce capacity. It advertises *Ferguson Bros. Mfg. Co., Hoboken, NJ.* Ferguson Brothers Manufacturing Company made furniture in Hoboken, NJ from 1898 - 1953.





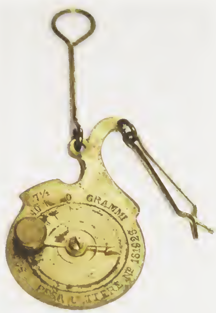
This letter scale by Salter was quite common in the UK with several iterations over the years as postal rates changed. It was widely in use up to the 1950s. They almost always came in a little leather pouch. From the top of the ring to the bottom of the hook it measures 5 inches, the celluloid face measures $1\frac{7}{8}$ by 1 inch. It proudly displays the Salter Knot logo, on the left the postal rates are displayed and on the right the weight. It has a folded metal body in which there are two springs, one on either side of the center which are attached to a second inner chamber to which the letter clasp is also attached. The celluloid face is fastened to the body by four small rivets.



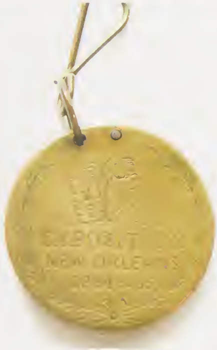


The second group is the pendulum scale typically made by the French and the Germans.

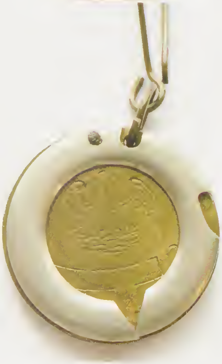
The French made this scale for the Paris *Exhibition Universelle* held in Paris in 1867. The body is made of brass; the letter clasp, pointer, poise weight and the handle are made of steel. The outside ring measures in grammes in increments as follows; 0 to 7½, 10, 15, 20, 22½ , 30 and 50. Additionally it is marked *Pése – Lettres* and *G. Hund*, the maker. The pointer remains in a stationary vertical position as the face revolves around it as the load is applied. The pointer is held in place by a small screw, at the end of the pointer is a round poise that appears to be held in place by some sort of rivet. It was probably sold as a souvenir during the exposition.

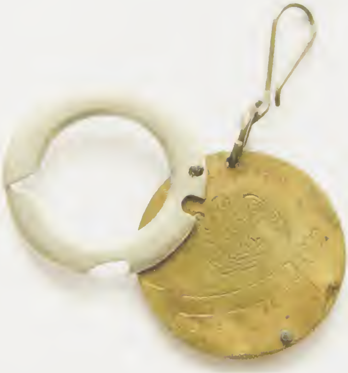


The Italians were not going to be left out of the small letter scale business as is evidenced by this small Pendulum scale. It appears as though all parts of this scale are made from brass. It is 3¼ inches long and 1¼ inches wide. It measures in grammes from 0 to 50. The first increment is 7½, next is 10 and it goes up in 5 gramme increments from there. Engraved on the front around the bottom is *PESA LETTERE No. 161926*. On the back of this scale is an advertisement that reads *BOSCA VERMOUTH SPUMANTI*, a very early example of using these small scales as an advertising give-away. This Italian scale was probably made by the French manufacturer G. Hund



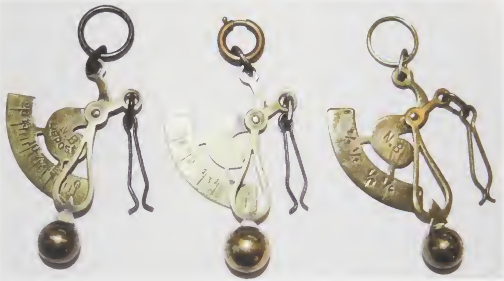
This little gem is a unique antique American postal scale. It was produced as a souvenir for the New Orleans Exhibition 1884 & 1885. It is a combination postal scale, envelope opener and cigar cutter. It was designed by Adler C. Clausen of Minneapolis, Minnesota and was assigned patent No. 314,801, dated March 31st 1885. In the patent description is the following: *My invention relates to a letter-scale &c., combined with a charm to be worn about the person, preferably on a watch-guard; and it consists in the combination of devices herein after described and claimed.*

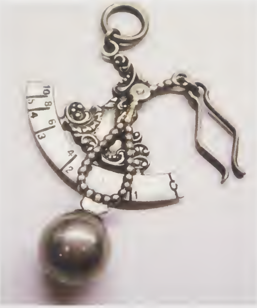




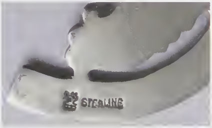
The body is made from brass and the slip ring is made from flat spring-steel. Engraved on the front is a measurement scale that reads left to right and starts at zero and is graduated in ounces from ¼ ounce up to 2½ ounces. As well, there is a depiction of a pelican sitting on a nest. Around the top it is engraved *Patent Applied For*. The back has engravings relative to the New Orleans Exhibition. A laurel wreath surrounds an engraving of a man pushing a bale of cotton on a wheeler; under that is *Exposition, New Orleans, 1884 & 85*. It is unclear whether Clausen manufactured these scales or farmed them out to a fabricator. I have no idea in what quantities they were produced. They are very rare; this is the only one I have seen.

These pretty little brass pendulum postage scales were made in France by the Narcissé Briais Company. They are made primarily of brass with the holding ring and letter clasp made from steel. From the top of the ring to the bottom they measure 2¼ inches. They measure the weight but do not show any postal rates. The first was for the French market, it measures up to 20 grammes in the following increments; 5, 7½, 10, 15, 20. It is marked *N. B. Depose*. The next two were made for the UK market and they measure up to one ounce in the following increments; ¼ ⅓, ½, ⅔, 1. The ⅓ and ⅔ weight measurements became necessary with the establishment of the Universal Postal Union (UPU) in 1874; these were the weights used to determine postal rates for international mail to other UPU nations. The marking on the middle scale is *Perry & Co.* It is my assumption that this scale was made for Perry & Co. by Narcissé Briais. The firm was founded in Manchester as James Perry and Co. in 1824, but later moved to London, where they made and sold pens and pen-holders, pencils, elastic bands and ink, and dealt in stationers' supplies. I would guess that these scales fell under the category of *stationers' supplies*. The third scale, also for the UK market is simply marked *N. B.* (Narcissé Briais). Because of their size I expect they were sold more as ornamental jewelry.





This pretty ornate American postal scale is made of sterling silver, it measures 2⅞ inches from the top of the holding ring to the bottom. There is no maker's mark but is marked *sterling* with a stylized duck hallmark. It weighs in increments of ounces up to 5 ounces as indicated by the outer scale on the arched panel. The inner scale reflects the postal rates starting at 2 cents for letters of one ounce or less.



Well, there you have it, a selection of the little guys, the 'Miniature Postal Scales'. I am sure that there are many more that have not been covered in this article and many of you will have them in your collections. What an interesting subset of scale collecting they are. In truth, I expect that they were not especially practical and many certainly were not particularly user-friendly, but on the whole they were really quite pretty. Even today as I visit with scale collecting friends you will see them. Ruth Willard with her Maltese cross locket, Donna Schoenly with her little brass pendulum scale, Jan Berning with her sterling tubular scale and others all proudly wear their scale on a chain. So I guess many of these scales met the goal set by many of their designers who specifically indicated that as well as being a postal scale they were pieces of jewelry and other items of ornamentation.

I would like to thank Diana Crawforth-Hitchins and Jan Berning for their help in researching and providing material for this article.

Weighing at the Banks Part 3: Silver Coins

BY NORMAN BIGGS

Silver coinage in the era of the sovereign

When the gold standard was introduced in 1816/7, the silver coinage was reduced in weight from 62d [pennies worth] per troy ounce to 66d per troy ounce. At that time there were four silver coins in circulation: the crown (60d, 28.27 g), halfcrown (30d, 14.13 g), shilling (12d, 5.65 g), and sixpence (6d, 2.83 g). A new coin, the florin (24d, 11.31 g), was added in 1849. These coins had the property that the mass of each one was proportional to its value: for example, a shilling weighed exactly twice as much as a sixpence. Consequently it was possible to check by weighing that a payment in silver coins, containing different denominations, was correct. For example, a sum of £10 in coins of full weight should have weighed 1131 g, whatever the denominations of the coins involved.

However, for most of the nineteenth century, the weighing of silver coins was not a routine occurrence. Since silver was no longer the standard of value, the law did not prescribe a least current weight for silver coins, and there were no systematic attempts to withdraw light coins. But despite the lack of an official policy for managing the silver coinage, there must have been reasons for the banks to weigh silver coins in bulk. In the Report[1] of the Standards Department for 1886 there is a table of customary weights for checking silver coin *formerly used by one of the principal London Banks*. The value for £10 in silver is given as 35 oz 4 dwt (= 1095 g) which is rather less than the full Mint weight of 1131 g.

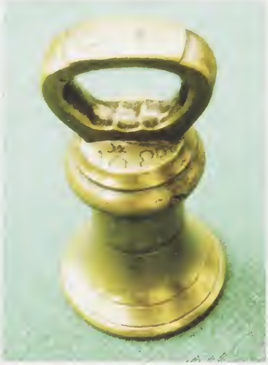
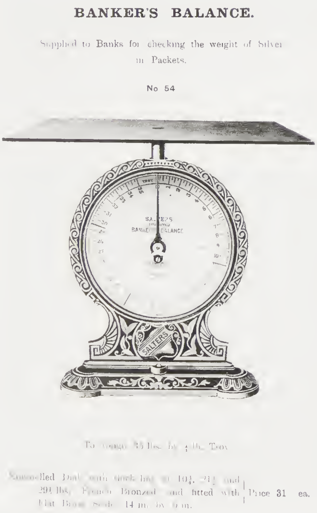


Fig. 1. A bell weight for checking £3 in silver coins, marked 10 oz 8 dwt.

An indication that the silver coins were in a rather poor state is that values even lower than the 'customary' ones listed in the 1886 Report were also used. In Figure 1 there is a bell weight for checking £3 in silver. The mass stamped on it is 10 oz 8 dwt, whereas the Report gives the relevant value as 10 oz 11 dwt.



BANKER'S BALANCE.

Supplied to Banks for checking the weight of Silver in Packets.

No 54

SALTER'S
BANKER'S BALANCE
SALTERS

To range 35 lbs. by ¼ lb. Troy

Enamelled Dial, with marking at 10¾, 21½ and 29¼ lbs., French Bronzed and fitted with Flat Brass Scale 14 in. by 6 in. | Price 31 ea.

Fig. 2. Salter's Model 54, 1901.

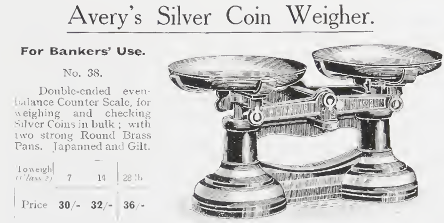
Weighing silver before the Great War

In the latter part of the nineteenth century, the retail trades grew enormously, especially in the industrial areas. One consequence was that many shops paid their 'takings' into a bank regularly. A large part of that money would have been in silver coin and, by the turn of the century, special scales and weights intended to be used by the banks for checking batches of silver coins began to appear on the market.

One completely new development was the use of spring balances: of course, they had the advantage that no loose weights were needed. Salter's catalogue[2] for 1901 advertised a Banker's Balance, Model 54, specifically designed for checking the weight of silver in packets (Figure 2). It was an upright spring balance with a flat platform and a circular dial, graduated up to 35 lbs by ¼ lb troy.

This balance would give the weight in troy of any packet of silver, but thick lines were marked on the dial at certain special values. These were 10¾ lbs, 21½ lbs, and 29½ lbs. They appear to correspond to sums of £35, £70, and £100, very roughly in line with the customary values given in the 1886 Report.

Conventional scales could also be used for weighing silver coins. In their 1906 catalogue[3] Avery's listed a Silver Coin Weigher, which was basically an ordinary roberval counter scale (Figure 3).



Avery's Silver Coin Weigher.

For Bankers' Use.

No. 38.

Double-ended even-balance Counter Scale, for weighing and checking Silver Coins in bulk; with two strong Round Brass Pans. Japanned and Gilt.

To weigh (Class 2)	7	14	28 lb
Price	**30**/-	**32**/-	**36**/-

Fig. 3. Avery's silver coin weigher, 1906.

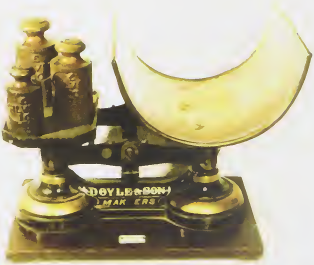


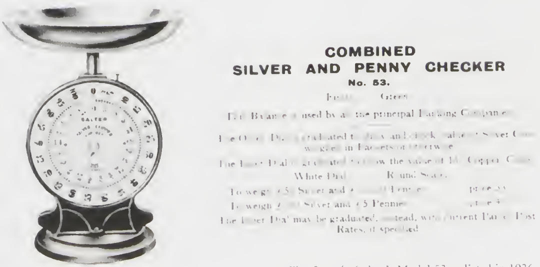
Fig. 4. Scales and weights for checking silver coins, probably c1910-1930.

They also offered weights for checking silver in specified monetary amounts, rather than by troy weight. The denominations were the same as for sovereign weights: £1, £2, £3, £5, £10, £20, £30, £50, and £100. In addition to brass weights of the flat, bell, and cylindrical type, Avery's also offered iron weights of the 'bar' design (see later, Figure 9).

Similar scales were made by Doyle & Son, a London scale maker whose sovereign weights are also familiar to collectors. The example shown in Figure 4 is accompanied by a distinctive set of cylindrical iron weights, painted with a gilt finish. It is not known whether these weights were specially made for (or by) Doyle's.

Between the Wars

By the end of the Great War, sovereigns had disappeared from circulation. The Gold Standard had effectively ended in 1914, but it was only in 1919 that it was officially 'suspended'. By this time the banks were handling great quantities of silver. Early in 1920 the market price of silver increased significantly, and as result it was decided[4] that henceforth the silver coins would contain only 50% pure silver, instead of the traditional sterling fineness, 92.5%. The weights of the coins were unaltered, a slight increase in thickness compensating for the lower



No 53

COMBINED
SILVER AND PENNY CHECKER
No. 53.

Fig. 5 Salter's Model 53 as listed in 1936.

density of the alloy. For obvious reasons the government was keen to withdraw the 92.5% silver coins. The banks were involved in this process, but since weighing could not be used, it had to be done by hand.[5]

In 1925, the UK returned to the Gold Standard. This was a political decision that had adverse effects on the economy, and it was abandoned in 1931. But it did not imply a return to the use of gold for the purposes of internal trade, and consequently there were no implications for the circulating coins.

Back in 1901, Salter's had produced a scale for checking silver coins 'in packets', and by the 1920s it had become usual for shopkeepers to sort their coins and put them into small bags with appropriate labels. In order to speed up the paying-in process, the banks often accepted these bags at their face value, checking them only by weighing. Both spring balances and beam scales continued to be used for this purpose. Salter's catalogue[6] for 1919 advertised a *Combined Silver Checker and Parcels Post Balance* (Model 53). It was graduated to check silver coins *weighed in packets or otherwise*, up to £50 or £100. The catalogue claimed that it was being used by many banks, including the London and Midland, the London and Provincial, and Lloyds. The same version of Model 53 was offered in 1933, but in 1936 it was listed[7] as a *Combined Silver and Penny Checker* (Figure 5).

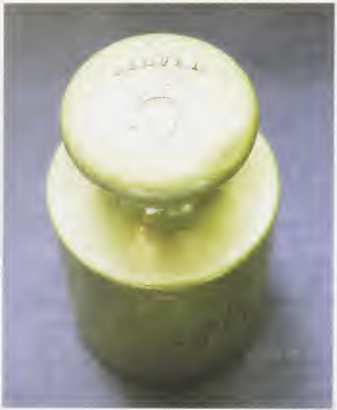


Fig. 6. An anonymous cylindrical weight for £5 in silver coins.

The significance of the new name was that pennies were now also being checked by weight. In fact, all the 'copper' coins (pennies, halfpennies, and farthings) had been made of a bronze-type alloy since 1860, but for some unknown reason the proportional weight-value relationship did not apply to them. Three pennies weighed an ounce, but the equivalent number of halfpennies was five not six. (A further anomaly was that this ounce was the averdepois ounce, not the troy ounce used for silver.) Consequently the Salter balance was only suitable for weighing pennies, not halfpennies or farthings. It will be noted that, by a fortunate coincidence, it was possible to equate the acceptable mass for £100 in silver with that for £5 in pennies. (In fact the full legal weight for the silver was 363 and 4/11 ounces troy, whereas for the pennies it was 400 ounces averdepois.) The Model 53 was easily adapted for checking other types of coins, and it remained in production, in various forms, into the 21st century.

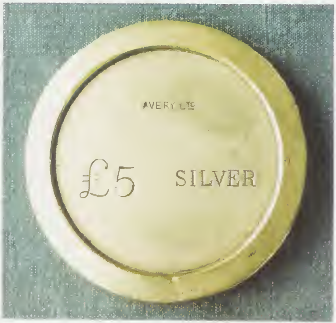


Fig. 7. Flat round weight for £5 silver, by Avery.

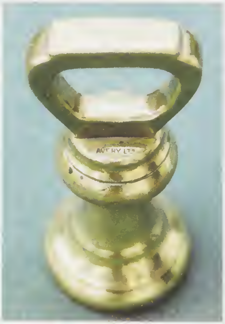


Fig. 8. Bell weight for £5 silver, by Avery.

Loose weights for use with beam scales were also produced at this time. The most common denomination was the '£5 in silver', which often took the form of a knobbed cylindrical weight made of brass (Figure 6).

Avery also produced brass weights in other traditional shapes – the round flat and bell styles are illustrated in Figures 7 and 8. Surviving examples of these weights are close to the conventional mass for £5-worth of silver, about 565g.

Avery's iron bar weights have already been mentioned. Here too the '£5 silver' denomination was most common, but a long range of denominations up to £100 was available. A few examples are shown in Figure 9.

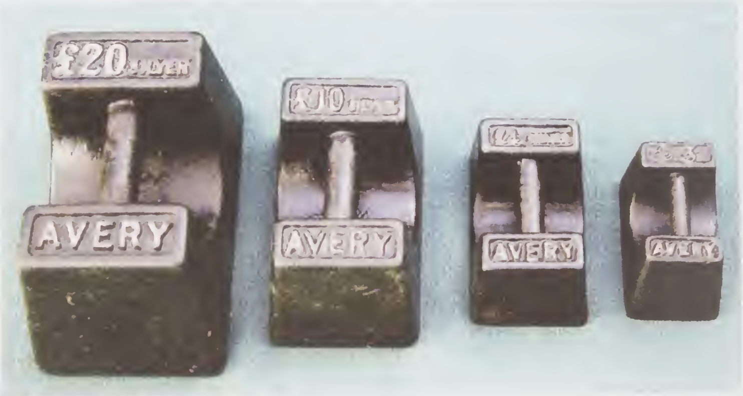


Fig. 9. – A selection of iron bar weights by Avery.

Collectors have found that bankers' weights from the inter-war period are rather scarce. This could conceivably be due to their limited usage, but a more likely reason is that the banks were very strict about recycling old weights for scrap metal. Particularly in the Second World War of 1939-45, both brass and iron were in great demand. But after the War had ended, there was a renewed demand for weighing in banks, and that will be covered in the next part of this article.

References:

1. Board of Trade, *Report on Proceedings and Business under the Weights and Measures Act 1878*. London: Hansard, 1886 (Appendix 13).
2. Geo. Salter & Co. Ltd. *Weighing Machine and Ironmongery Section*. West Bromwich, 1901. See p. 39.
3. W & T. Avery Ltd. *Catalogue No. 230*. Birmingham: 1906. See pp. 257, 278-280, 282.
4. John Craig. *The Mint*. Cambridge: University Press, 1953. See p. 355.
5. C. E. Challis (ed.). *A New History of the Royal Mint*. Cambridge: University Press, 1992. See p. 560.
6. Geo. Salter & Co. Ltd. *Weighing Machine and Ironmongery Section*. West Bromwich, 1919. See p. 38½ [sic].
7. Geo. Salter & Co. Ltd. [*Catalogue*]. West Bromwich, 1936. See p. 22.

Two Bell Weights

BY MICHAEL ROBINSON

with DIANA CRAWFORTH-HITCHINS

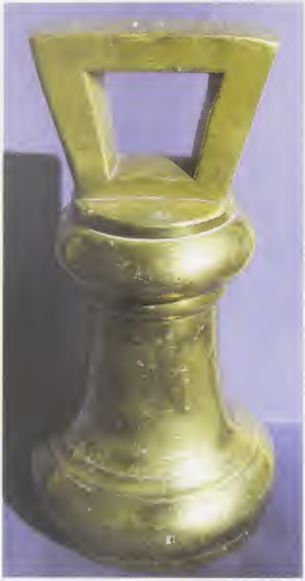


Figure 1. The 14lb weight, showing the old-fashioned handle, and the yellow brass.

I went to a sale in Birmingham during the period when I was unable to drive, and almost came to regret that my eyes were bigger than my muscles. (Although an ancient of 6' 2", I am still quite strong from years of building and tarmaccing.) The auctioneer had clumped into one lot a fancy desk set with two Indian elephants holding a cigar lighter, a modern Indian brass kettle and two bell weights weighing a total of 42 lb (21 kilos). See Figure 1. Being intrigued by the marks on the two weights, I managed to secure the lot with my top, final bid.

Then I had to get them home in my one hold-all. Taxi to the station, tottered to the platform, must have looked decrepit, given a hand by a robust young man. Change trains, helped by a porter. Change trains again, must have looked totally pathetic, as a female British Rail porter offered to carry the hold-all which she promptly did, - but - totally humiliated, I insisted on a handle each. Taxi from Chester Station to my home, which is normally a ten-minute walk. But worth the effort and the sweat and tears once we had the story!

So why had I gone to such lengths? The two brass bell weights were the older shape associated with bronze bell weights, with sharply angled handles, but made of the nice yellow brass made fashionable during the reign of Queen Victoria. One weight was stamped 1851 and one was stamped 1852, but they looked like part of one set. They bore no maker's name, and although they looked like Standards, bore no engraving. See Figure 2.

They were both stamped Ft St GEO. What did that mean? See Figure 3. I consulted Diana, and she suggested that they came from Fort St George. But where was that? Google is a wonderful source. Fort St George was built in 1639, on a marshy peninsula between a river and the sea, half way down the Coromandel Coast, India, by British merchants who wanted access to the makers of cotton and silk cloth and to the trade in spices during the 17th century.[1] See Figure 4. The fort was necessary to protect the Westerners from each others' grasping hands, but

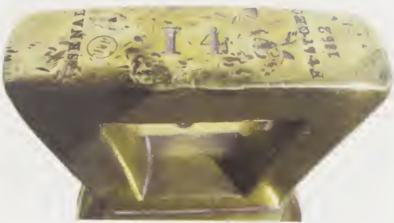


Figure 2. The battered top of the handle, with no reference to the units. After 1878, all weights had to be marked with the units - cwt, pounds, ounces etc.

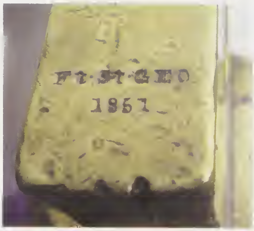


Figure 3. Was this the date on which it was received? Or an inventory mark when it was checked?

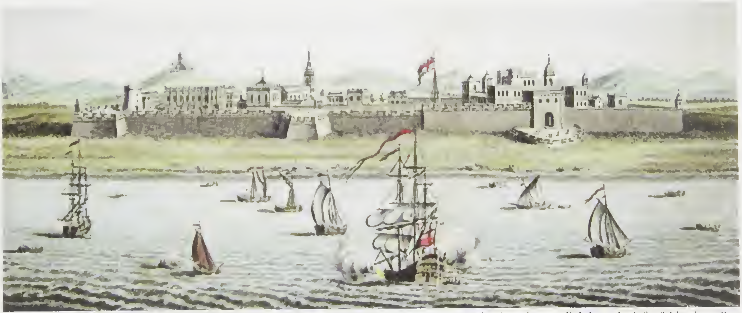
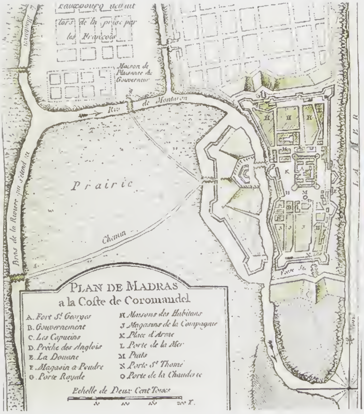


Figure 4. Fort St George, seen from the sea on the east. Behind the Fort was a river coming into the sea slightly to the left of this view. Part of an etching done about 1794 by Jan Van Ryne.

local Indian rulers sensibly insisted that all the British had to live within the Fort. A town grew up round the fort that eventually was called Madras (and now called Chennai). See Figure 5 (plan).

So now I knew that I had London-made weights in British weight units, that had been used in Fort St George, India. Why was the 28 lb weight also stamped MADRAS ASSAY OFFICE 1853 on the bottom? See Figure 6. If it was stamped within a year of its arrival presumably it started life in the Assay Office. Back to Diana to find out why they wanted an Assay Office in a Fort.

Figure 5. The French wanted to own the Fort, as it was strategically placed on the Coromandel Coast. They had French priests within the Fort, who ministered to the needs of the Roman Catholics, but who could inform the French of the lay-out. Note the river running through the Fort. By 1850 this river had been blocked off and the walls of the Fort reinforced. The Mint was probably the building within the Fort at top left of this plan.



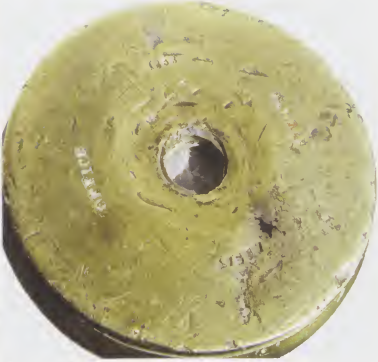


Figure 6. The base of the 28 lb weight, showing no verification mark in the lead, but MADRAS ASSAY OFFICE 1853 stamped into the brass.

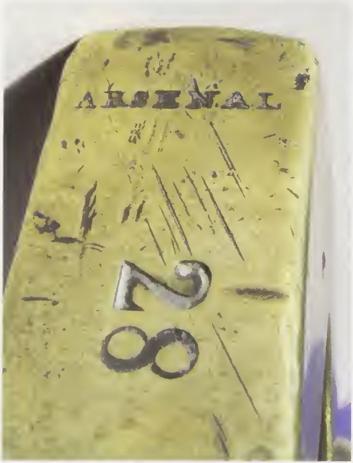


Figure 7. This stamp ARSENAL came from a punch with the whole word on it, not from individual letters. This suggests that there were a lot of items to be stamped ARSENAL.

Fort St George was where old Indian coins were collected, melted down and turned into new Indian coins (with a percentage taken by the British to cover costs.)[2] The Mint was within the walls of the Fort, and the officials there, (who were not trained in their role,[3]) had to report back to their masters in Britain, so needed some accurate weights to demonstrate their honesty. Mints were not under the jurisdiction of British Weights & Measures Inspectors, so the weights were not specifically called Standards[4] even though Fort St George received very accurate weights verified by the Exchequer in London in 1829 and again in 1841. So could "my" weights be from one of those sets, just stamped in 1851 or 1852 in Fort St George? It seems very unlikely, as the Exchequer always stamped their Portcullis mark onto every weight they sent out, and these weights show no sign of Exchequer marks.

Then Diana caused me a big re-think. In 1849 and 1851 the Mint at Fort St George was quoting prices to make railroad wheels for the Civil Engineers of the 1st Division. A Mint making wheels? Really? Yes, the Mints at Fort St George and at Calcutta had iron foundries and made sets of wheels for the Government.[5] So were these weights used in the iron foundry? Given the mass of the wheels (up to 280 lb each), it seems more likely that the iron foundry used big iron ring weights to check each wheel, not lots of smart brass bell weights.

The ARSENAL stamp on top was puzzling in view of the fine quality of these weights. See Figure 7. Weighing in an Arsenal[6] would be less precise than weighing in an Assay Office or a Mint, so when the weights started to get inaccurate, were they down-graded to weigh gunpowder? The extreme battering they have endured suggests some inebriated soldiers casually dropping them on and off the scales. (I dread to think what condition the scales were in.[7])

The lead in the plug underneath bears no verification marks now. Were they ever checked? There is an oval mark on the handle with TRI or TR1. Was this to do with Troy weight? I checked their weight, and they are definitely both Avoirdupois not Troy weights. But TR1 might be an unknown verification mark.

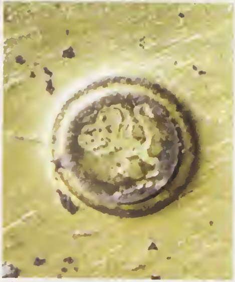


Figure 8. The 8mm stamp on the shoulder of each weight. The rampant lion is holding a crown between his paws.

Then on the shoulder, there is a little round mark of an upright lion bearing a crown in his paws. See Figure 8. Back to Diana. Who would verify weights? Who was ruling India in 1851-1853? The British Government? No, the East India Company was[8], but what was their Crest? It took a while, but with google's cooperation, she got there. The East India Company minted its own coins,[9] sometimes with their crest on it, a lion holding a crown, with his right rear foot on a ball, while standing on a torse (a wreath of twisted cloth). See Figure 9.

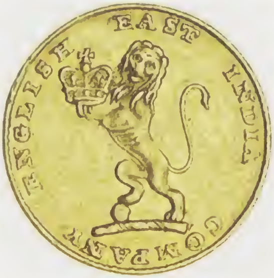


Figure 9. A half-mohur coin showing the East India Co. crest. The detail shows that the lion has his right foot on a ball and he is standing on a torse.

So I have weights made in London, probably ordered by the East India Company, shipped out to Madras, used in the Mint, verified there, then used in the Arsenal, and still there during the Indian Mutiny of 1857, presumably being used to weigh out gunpowder for the cannons[10] that are still there today in Fort St George Museum.

Do I regret the pain and humiliation of the journey home with them? Not one bit. Their story is so interesting, covering a period of Anglo-Indian history that we should all know more about. Do read the notes below, as they show why the surrounding history is so illuminating!

Notes & References:

1. Numerous web-sites from searching "Fort St George". *The East India Company bought the exposed and waterless site of Madras in 1639. It was once described as 'the most incommodious place I ever saw'. The popular story is that the company's buyer, Francis Day, bought the land because he had a mistress nearby, and wanted their 'interviews' to be 'more frequent and uninterrupted'* The Fort was badly designed, having a river flowing through it, and notorious for the lack of fresh sea breezes, which were blocked by the high walls.

Upon this settlement the English expanded their colony to include a number of other European communities, new British settlements, and various native villages, one of which was named Madraspatnam... Madras was the new large city which grew up around the Fort including the "White Town" consisting principally of British settlers, and "Black Town" consisting of principally Catholic Europeans, Armenians, Jews, and allied Indian minorities.

2. Letter from Calcutta Assay Master to the Mint Committee in London, 1817. *We desire that every attention be paid by the officers of the mints at Calcutta, Fort St. George, and Bombay to the remarks of his Majesty's Assay Master respecting the several deviations from the standards with the view of correcting the same in future. ... The exceptions regarding principally the deviations in the coinage of the Mints at Fort St George and Bombay, to be owing to some of the meltings being worked into coin without having been previously submitted to the examination of the assay masters at those mints.*

3. Dr Cadenhead of the Madras service, a noted doctor and occulist, died in 1851, ...*After having been employed for some years in the usual duties of the medical service, with the exception of some time spent in charge of the assay office at the Madras Mint, he was appointed to political office in Ganjam, and in the hill tracts of Orissa. ...*

4. Ricketts & Douglas, *C & J, Marks & Markings of Weights and Measures of the British Isles*,
Weights verified at the Exchequer were supplied to India but possibly to check trade weights, not those used within the Fort.
The Presidency of Bombay, Fort William, 17th June 1829,
The Presidency of Madras, Fort St George, 17th June 1829
The Presidency of Bengal, Fort William, 17th June 1829
Messr. Colvin & Co, Calcutta, 7th June 1831
Madras Presidency, 26th May 1841
Bengal, 19th Jan 1864
Madras, 7th Oct 1864
Madras 1st Oct 1865
Maharajah of Travancore, 8th Sept 1871
Maharajah of Travancore, 15th May 1872
Calcutta Mint, 13th Aug 1872
Government of India, 24th Dec 1873, & 1875

5. Selections from the Records of the Madras Presidency, 1854:
The quantity of finished work delivered by the iron foundry for the use of the Dept of Public Works, from March 1849-March 1851 is as follows:
228 [railroad] wheels weighing 63,840lb
36 smaller wheels weighing 5,048lb
72 bearings weighing 1,080lb
21 pair of large sized lock hinges weighing 7,812lb
4 ditto smaller sized weighing 864lb
4 ditto third size weighing 432lb.
Total 79,076 lbs or 35 tons.
Col Cotton's letter is annexed in speaking of the saving to Government to be 250 rupees per set of wheels, and is equal to 17,625 rupees for 35 tons [as compared with getting the work done at the Calcutta Mint.]

6. The Grand Arsenal, at the south-western corner of the Fort, was constructed in 1772 to store ammunition. This was designed by Co. Patrick Ross and built by John Sullivan,.

7. Oertling supplied balances to the Fort St George Mint twice in 1849 and again in 1873, but we do not know who supplied the Arsenal's scales.

8. The rule of large parts of India by the East India Company was a very peculiar arrangement. Technically the EIC was a private company, trading in India to make a profit for its share-holders. This suited the British Government, who could claim ignorance or innocence when the EIC brought disrepute on the British, but if the EIC made huge profits (as they did) the Government back in Britain expected huge rewards. In effect, the EIC was licensed to have a private army, to negotiate with Indian rulers (and depose them if they were awkward), have its senior officials behaving like Kings of huge States, and run all the services in India. This anomalous situation only stopped in 1857/8, after the Mutiny (see note 10), when the British Government came out of the shadows to officially rule most of India.

9. India is a numismatist's dream, having a huge range of gold, silver and copper coins. It would take a tome to explain them all, but, briefly, there were monetary systems in Madras using Star pagodas and cash, arcot rupees (coined in Fort St George), double and single fanams, pice, doodees and half doodees, annas, and swamy.

10. The Indian Mutiny had been fomenting for some years before it erupted in 1857. The causes were numerous, involving very poor rule by some British EIC Officials, insults to religions, reduction of rank of the previous rulers of India, rumours and exaggerations, plots and over-reaction, and finally, rumours about the cartridges used with the new Enfield Rifle. As the cartridges had to be opened with the soldier's teeth, the Hindu soldiers were contaminated if the necessary grease came from pigs; if the grease came from cows, the Muslim soldiers were contaminated. The battles were violent, the deaths appalling (up to 10,000,000 Indians dead by some estimates) and the consequences unpredicted. It resulted in transfer of rule to the British Crown.

Acknowledgments:

With thanks to Barry Oliver and John Allen for information, and to Diana Crawforth-Hitchins for photographing the weights.

Book Review

Die Bergischen und Märkischen Goldwaagen 1749-1850 by Günther Unshelm, published 2011. Available from Günter Unshelm, Brucknerstr. 34, 40721 Hilden <www.guenter-unshelm.de> Price 49,50 €uros plus shipping.

The title translates as *The Goldscales of the [Duchy of] Berg and the [County of] Mark, 1749-1850.*

How do I recommend a book of 280 pages written in German to an English speaking audience?

Many of the potential readers will either know from pictures or own in their collections coinscale boxes from the old German territories of Berg and Mark, both east of Cologne, an area well known for manufacturing of all kind of tools made from metals due to the easy availability of waterpower.

This book covers the subject very comprehensively. It is by Günther Unshelm, a founding member and president for many years of the German association of collectors (Maß & Gewicht, Verein für Metrologie), after he has dedicated half a lifetime to this special area.

It deals with a basic omission, as publications about the different sites of production of coin scale boxes in Germany are virtually non-existent, except for some articles in journals like Maß & Gewicht. Comprehensive publications about the productions in Nürnberg, Cologne and Berlin are still missing.

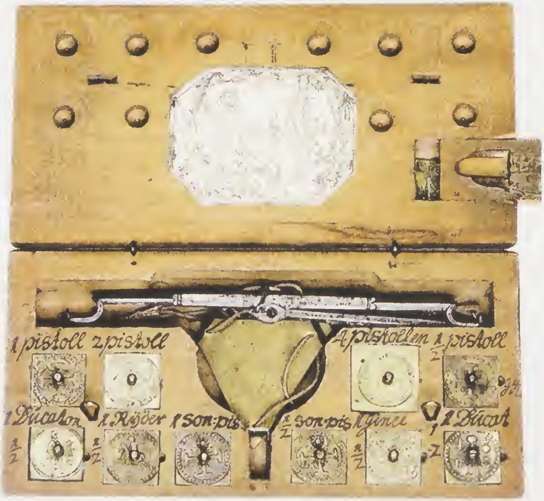


Figure 1. By Johann Peter Aeckersberg, (born 1707-1790), gold scale maker of Wichlinghausen. This set has 13 weights, some without knobs, secured under the knobbed weights. The label was stuck in by somebody else.

This book systematically describes the important parts of the boxes. It offers:

→ 35 pictures of hooks connected uniquely with the name of the maker of the box
→ 17 pictures of marks (hot branded) "Justirt" again connected with the name of the maker
→ 5 pages of drawings of typical parts of Berg and Mark scale-beams with their technical names
→ 33 pages with 239 photos, describing and more importantly, also showing photos of the typical coins and the connected coinweights of the time
→ a glossary
→ a list of helpful and knowledgeable people who assisted with specific parts of the book
→ auction houses that deal in scales
→ an impressive bibliography

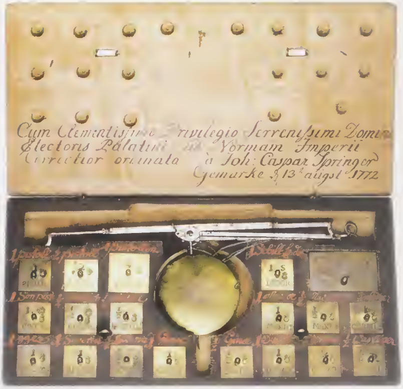

Cum Clementissimo Privilegio Serenissimi Domini
Electoris Palatini ad Normam Imperii
Correctior ordinata à Joh: Caspar Springer
Gemarke d 13t augst 1772

Figure 2. By Johann Caspar Springer (born 1715-1796) of Elberfeld and Gemarke. Note the exact date of manufacture (13th August, 1772.) 18 weights, each hole labelled in red ink.

The main corpus of the book is dedicated to the 29 makers known in the two areas, with 229 big clear photos, showing boxes fully open, showing the trade label in focus, the complete set of coin weights and close-ups of details where helpful. There are up to 47 photos of any one family's output, enabling the reader to have a comprehensive view of their manufactures. For each maker or family of makers the book offers all kind of historical background and connections between families.

In the second part, Unshelm describes further 50 cases where boxes were sold either by verifiers or traders in other towns like Bremen, Namur, Amsterdam, Düsseldorf etc. or were made for use in Italy or Spain. He includes another 119 of his excellent photos of boxes and details. The typical labels were often changed to give the name of the trader instead of the maker. Boxes for specific territories often show special compilations regarding the type or the quantity of coinweights included. This is a section which has to be studied with care, as a Lindermann or Jecker scale may look confusing otherwise in this surrounding.

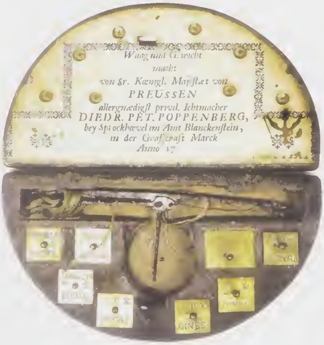
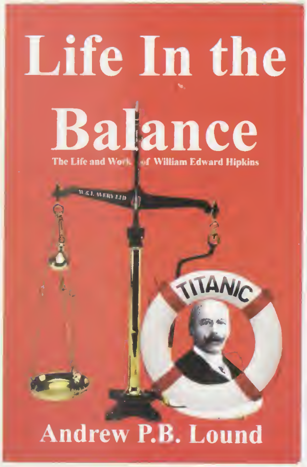

Waag und Gewicht
macht
von Sr. Kœnigl. Majeſtæt von
PREUSSEN
allergnædigſt privil. Ichtmacher
DIEDR. PET. POPPENBERG,
bey Sprockhœvel im Amt Blanckenſtein,
in der Grafſchaft Marck
Anno 17

Figure 3. By Diederich Peter Poppenberg (born 1746-1824) of Sprockhoeval. Deiderich Peter and his brother Johann Peter each made and labelled their scales alone before combining to work with their third brother Peter Caspar, as the Gebrueder Poppenberg. This set has 7 weights and was made in 1780.

The book is easily worth its price, even for collectors who struggle with the German language because the illustrations are so clear and numerous. It can be purchased from Günter Unshelm, as above.

DR. LUDWIG RAMACHER

Book Review



Life in the Balance by Andrew P.B. Lound. Published by AuthorHouse, Bloomington, Indiana, USA, 2011. Paperback: ISBN 978-1-4567-9800-0, price £15/$20. Hardback: ISBN 978-1-4567-9801-7, price £25/$36. 300 pages, 30 b&w illustrations, size 9" x 6" (approx. Medium 8vo).

When your reviewer first caught sight of this book, his instant reaction was *What a cracking good title for this subject!* to be followed by *What a super cover! — Let's hope the rest of the book lives up to this auspicious start.* Does it? Yes, it does, with one proviso which we shall come to later.

The subtitle of this book, *The Life and Work of William Edward Hipkins*, really says it all, but who exactly was this man? Some ISASC members may recognise the name, but only a very few will know anything about him. With the publication of this volume that should no longer be the case. William Edward Hipkins (1857—1912), hereinafter referred to as WEH for brevity, has two claims to fame. Firstly, he was the first managing director of W&T Avery not to be an Avery family member, and he turned the company from being merely a notable Midlands scale-maker into one of the first global corporations and Scale-maker to the World. Secondly, he was one of those hundreds of souls lost in the Titanic disaster of 1912. The author has therefore had the opportunity of finding data on his subject from not just two but three completely different sets of sources: family history, Avery and Birmingham industrial history, and Titanic disaster sources. He then had the task of welding these disparate data sets seamlessly into a coherent whole. This he has done brilliantly. *Life in the Balance* is written as a straightforward, no-nonsense biography, telling the tale of WEH in chronological order from birth to death. However, this requires long excursions into the complex history of Birmingham brass foundries and engineering companies, and especially the history of Avery. These have had to be inserted into WEH's family life, his industrial and commercial life pre-Avery, and his long and massive re-organisation of Avery. Lound is clearly a master story-teller, and the result is a surprisingly readable account considering the nature of the subject. In fact, it comes over as "a rattling good yarn" and quite a page-turner. One wants to see what happened next.

The production values of the book are generally very good. The covers are in the modern laminated full colour printed style, and the binding seems to be as good as soft cover books can be. The print is crisp and clear, and it is heartening to see that the book has been printed on acid-free paper. The illustrations, mostly photographs, are well chosen and have been printed in the body of the book rather than on photographic paper, presumably from cost considerations. Some of the illustrations have very wide margins and could have been printed larger to considerable advantage. There is a good bibliography and a full set of end-notes and references.

I won't spoil the story for you here, but a *very* brief synopsis may be helpful. The Hipkins were a middle class family of corkscrew makers. WEH was a sickly child, and always a little weak throughout life. He lost his father early, and his mother had to run the business, very successfully. He was well educated and did both the European Grand Tour and a tour of part of the USA; both in 1873, aged only 16. The European tour reinforced his already great appreciation of Napoleon, and the USA tour opened his eyes to the possibilities of modern business practices, especially factory layouts. His mother made him learn their business the hard way from the ground floor up, in every workshop and office. After having successfully taken over the family business he was, in effect, head-hunted as managing director of a Birmingham rope-making company and then again as a director of Avery, rapidly becoming its managing director with total control. It was WEH who closed Avery's numerous sites in Birmingham and rationalised the lot onto what we now know as the Soho Foundry site. The James Watt Soho Foundry proper, on one side of the huge site, was to be razed to the ground and a completely fresh start made. There was then a change of plan; the Watt business was bought "lock, stock and boiler" (in Lound's delightful phrase) and rebuilt. This was an astute move for reasons too complex to go into here. From this point on, WEH built massive new workshops on the huge site using both everything he had learned in the USA, and the ruthlessness of the teachings of his hero Napoleon, whose little volume of Maxims he carried in his pocket at all times. WEH used his mental strength to compensate for his physical weakness. He expanded the Avery branch network across the entire UK by ruthless and even brutal methods, a topic which is perhaps not sufficiently emphasised in this book. This policy was continued by his successors Sir Gilbert Vyle and Sir Percy Mills, but the entire direction of Avery's travel for decades to come was set solely by WEH. Lound has taken especial care in recounting Avery's expansion into the USA scale market as The Avery Scale Company, based in Milwaukee. It was their success in securing a big contract with the American navy which necessitated WEH going over there in 1912, his fourth trip across The Pond. There was what seemed to him to be a wonderfully fortuitous coincidence, his sailing over there as the head of one of the world's greatest companies, essentially his creation, and the maiden voyage of the British, newest, biggest and best steam ship to date, the White Star Line's "Titanic." He just had to be on it, to be seen amongst the Great and the Good, with the possibility of making more useful contacts to Avery's advantage. This is why WEH was on the Titanic.

The research behind this book is truly meticulous; indeed the word "exemplary" comes to mind. The author spent nearly thirty years on this project, and it shows. Not only is the level of detail in his account extremely impressive, but it is accurate too. He takes the view that every fact should not only be checked, but double-checked — and then checked again; nothing should be taken at face value. It is going to be extremely difficult to find any factual errors in this book, which is probably an almost unique statement in a book review! Your reviewer has checked several seemingly contentious or dubious statements, only to find that Lound is correct in every case. Let me give you just one example.

Concerning WEH's train journey from Birmingham to Southampton via London, to catch the Titanic, he is said to have arrived at Broad Street station in London, before transferring to Waterloo. Now "everybody" knows that the old London & North-Western Railway (LNWR) terminus in London was Euston, and still is. Lound must be wrong! But, a little research showed me that *at the period in question*, the LNWR had very friendly relations with the North London Railway (NLR), and a few LNWR trains did indeed terminate at NLR's Broad Street station. Lound too spotted this apparent anomaly, and took the trouble to find the applicable railway timetable of 1912, confirming Broad Street beyond doubt! Such is the level of care taken by him in constructing this biography. Another instance of his care is the way the story is summed up in the images on the front cover. There is an Avery shop scale carrying on the goods pan a Titanic lifebelt with a photo portrait of WEH within it. On the rear cover are the logos of the Avery Historical Museum and of Avery's current incarnation, Avery Weigh-Tronix. The background to all is of an eye-catching bright red, which has been carefully chosen to be that shade recognisable by Avery men and ISASC members as Avery red — a nice touch!

Quite apart from the obvious biographical highways, the book takes the reader into some interesting byways too: corkscrews and corkscrew collecting; Brassfounder's Ague; the disgusting Restorative Soups; descriptions of the chaotic organisation and strange working practices at Avery's and elsewhere in the 19th C., including the concept of Saint Monday; rope-making; the origins of IBM, and many more.

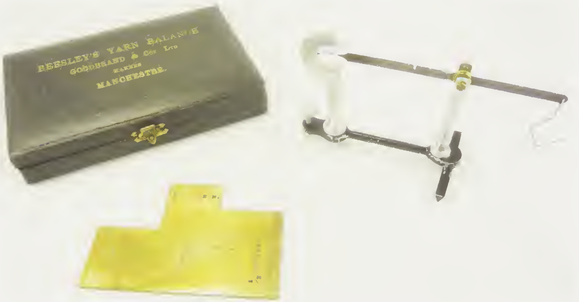
The WEH story, a well-crafted tale created from meticulously researched materials, sits there between the covers of the book, just waiting to roll off the pages into the reader's lap. But does it? Well, yes and no, not quite as the author intended. Fortunately the story-telling is so good that it rises above the short-comings, but they must be mentioned. In my opinion there are far too many instances of poor punctuation and syntax, as well as spelling errors. The result is that I found some sentences difficult to read, and occasionally quite impenetrable, for example, the sentence near the foot of p. 55, beginning 'The city …' One very obvious spelling mistake is Emporer for Emperor, which occurs in huge type in the titles of chapters 9 and 19, and is repeated on the Contents page, despite being spelled perfectly in the chapter 3 title and in the text generally. Incidentally, my spell-checker automatically spotted the mistaken Emporer in this review. There is a very useful set of end notes and references, but the lack of an index is surprising in a book of this complexity. Section headings within the chapters would have gone some way toward mitigating this omission. It would also have been very helpful if a simple Hipkins family tree had been provided.

This book is timely for the 2012 centenary of the Titanic disaster, but I suspect the Titanic enthusiasts will be disappointed as only one chapter is relevant to their subject. We at ISASC are luckier as most of the book concerns Avery. Yet we must remember it is a biography of a man, not a company history, so Avery does not appear until page 80, and we should not expect any technical data on the products. Instead we should enjoy the considerable light shed on both management and manufacturing processes at Avery; your reviewer particularly liked the detailed account of brassfounding in chapter 5.

Should the Avery collectors within ISASC lay down their pounds and dollars for this book? Assuredly yes, in spite of the shortcomings noted above. Readers will learn much about the background to the production of their cherished Avery scales and weights. Very reasonably priced, the book is good value for money, giving a mass of interesting information per dollar or pound. My review copy will go straight onto my library shelves, for I have found herein useful pointers relative to my own researches.

BARRY J. OLIVER

Showcase



The page that accompanied this Beesley's Yarn Balance (patent 33673/22 of 1886, still in use in 1926) reads as follows: *For ascertaining the exact counts of Cotton, Woollen, Silk and Linen Yarns.*

Will test from Cops, Hanks, or small pieces of Grey or Finished Cloth.

Correct counts shown at a glance, dispencing with the estimating and guess work usually required with other balances.

The most important feature of this instrument is the scientific principle embodied in the design, which is that the point on the Indicating Scale at which the test is commenced is identically the same point at which the result is obtained.

The apparatus is strongly made and well finished, with no delicate wires to become bent or distorted, whilst it is extremely sensitive, giving the results with absolute accuracy.

The Instructions for Use on the back read as follows: *1. Set pointer directly opposite datum line(needle) on scale by means of adjusting screw on left of machine. 2. Hook large weight in slot on left-hand side of beam. 3. Cut threads of yarn exactly to template length of material under test and place same on yarn hook on right-hand side of beam. RESULT:--Counts are indicated by the number of threads required to be placed on yarn hook in order to bring the pointer back to position (1), i.e. 30 threads of yarn=30's counts.*

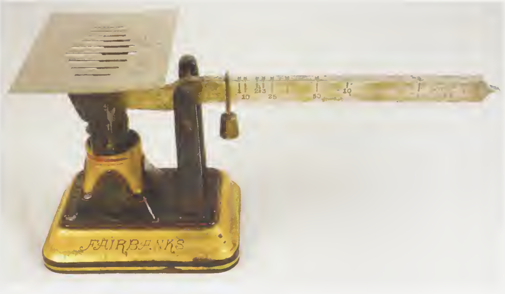
The case measures 6½" by 4½" and reads *Beesley's Yarn Balance, Goodbrand & Coy Ltd. Makers Manchester.*

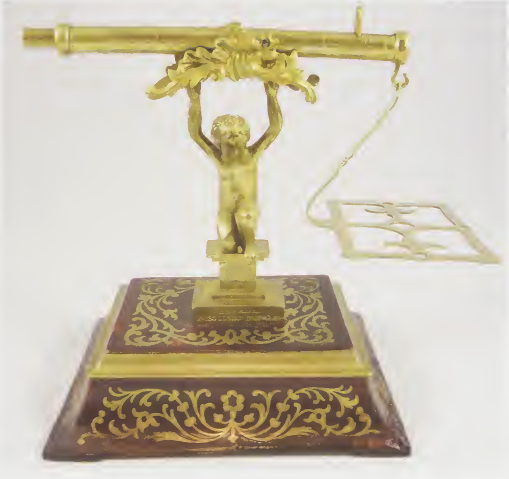
Phil Wehman Collection

This Fairbanks Counterfeit Coin Detector is made of cast iron with a nickel-plated brass plate, beam and poise. It weighs and determines thickness and diameter of gold coins of $2½, $3, $5, $10 and $20 denominations and silver coins of $1, 50¢, 25¢ and 10¢ denominations. It retains most of its gold, red and green original decoration. The scale measures 10¼ inches long and its plate measures 3" by 4".

G Hoag was issued patent number 216184 on June 3, 1879, for a Combined Scale and Coin Tester but these are listed in Fairbanks' catalogs up through 1911. They were available for *Coin Only* or *Postal and Coin* use.

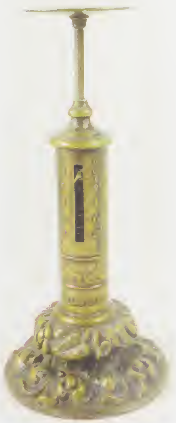
Judy & Eric Soslau Collection.





This rare English letter scale was based on the design of Dec. 20, 1839 registered by H. B. Wright of 44 Upper Marylebone St., London. The base measures 5½" by 4¼" and is made of Buhl (tortoiseshell inlaid with brass). The scale is 6½" tall, features a kneeling cherub holding up a cylinder shaped 5" long tubular beam with a telescopic sliding weight to which a letter plate measuring 3½" square is attached. This scale has a capacity of 4 ounces.

Kurt & Ann Beyreis Collection



This brass candlestick postal scale is unusual in that it has a skirted base with a high relief design of leaves and ribbons, made around 1850 for the British market. It is one of many candlestick designs made by R.W. Winfield, Birmingham, has a 4 ounce capacity and measures 7 inches tall.

Carol & Bob Hayden Collection.

Number 129 **February 2012**

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

A Balanced View

Here we are in the New Year with exciting things being planned for your Society. You should have received the registration letter for the ISASC Convention, May 17-21, in Pittsburgh. Please take some time to look it over and consider joining your fellow Scalies. We offer several options so that you can choose the one that best fits your schedule. Hope to see you there!

Soon the sounds of spring will be heard as baseball players report to spring training. Weighing is illustrated in George F. Will's book "BUNTS" as he writes about one of the most famous hitters in major league baseball. "Ted Williams used a postal scale in the club house to make sure humidity had not increased the weight of his bats."

Pittsburgh—It's Lovelier the Second Time Around

It has been ten years since our last convention in Pittsburgh and a lot has changed, both for the city and for the Society. Pittsburgh has undergone extensive urban renewal during this time and we think you will like the results. Ten years ago the Society was forging ahead with new leadership following President Bob Stein stepping down after leading the organization for twenty-five years. It was at the convention in Pittsburgh in 2002 that we received the first grant from member Bill Everett to start the groundwork for what has become the ISASC Collection. Pittsburgh was chosen as the convention site this year to honor what has happened with this collection since that first initial step taken ten years ago. We think you will be very impressed!

Your Host and Hostess, Les and Elaine Firth, along with their convention committee members, Mary Anne Murphy, Kurt and Ann Beyreis, Larry Press and Bryan Negrini, invite you to join them for this year's convention in Pittsburgh, May 17th to 21st. They have been busy lining up an exciting agenda for the weekend. The distinctive feature of this convention will be the opportunity to see four major collections including our own ISASC Collection.

Our hotel is adjacent to one of the three rivers that flow through Pittsburgh and is directly across from downtown. In addition to the beautiful view, you will be located in a lovely small dining and entertainment complex. We are in walking distance to downtown, the riverfront trails, the subway, the riverboat pier, the duck boats, Mollie's Trolley tours and the inclines.

For those choosing to stay Sunday afternoon, a duck boat (an amphibious vehicle that operates both on land and on water) will take guests on a 45 minute land and water tour on the way to Mary Anne Murphy's scale collection. After viewing the collection, the boat will take folks back to the Sheraton. Monday is a great opportunity to see the beautiful Pennsylvania countryside and visit the collections of Larry Press.

By now you should have received your convention packet describing the events taking place over the convention weekend. This information can also be downloaded from our website www.isasc.org. If you have not received your packet, or have any questions, please contact Les Firth at LNFirth@verizon.net or 724-662-0794. It has been a while since we have had a convention in the eastern area of the country, so we hope to see some folks that haven't been able to attend in the last few years. Come early or stay over to take advantage of a great city while enjoying the company of fellow scale collectors. So mark your calendars, make your plans, and we'll see you in Pittsburgh this coming May.

Getting Ready for the Debut

As the old saying goes, "There is no rest for the weary", and this certainly applies to the members who have spent countless hours getting the ISASC Collection ready for viewing at the May convention in Pittsburgh. Since the last update several major work projects have taken place. We received the Schott Collection in early December after it was packed up in Kansas City by Barbara Schott with some help from Bob Jibben. After its arrival Bryan Negrini helped with the unloading. Between the many heavy scales on the floor and the 100 plus boxes, it filled all the entry and working area floor space. Kurt and Ann Beyreis and Mary Anne Murphy spent the first week of January unpacking and tagging the items from this collection, as well as an unusual Toledo scale donated by Larry Violette. They also used this time to revise the display plan to accommodate the increased number of large scales.

A couple of weeks later Kurt and Ann returned to Pittsburgh, this time with grids and brackets for hanging scales which they then proceeded to mount. Again they worked on the display plan in between putting a large glass shelving unit together. Ann devised and constructed a system for hanging dividing curtains between the display and storage areas. There is still more to do and the work will continue right up to convention time. Beginning in March, there will be several more work sessions with the last being reserved for the "spiffing" phase. We sincerely thank everyone who has helped so far. Slowly, but surely, everything is coming together for the May grand debut of the ISASC Collection in its new display facility.

Election of Officers

Included in the mailing of your EQM last November was a ballot for the election of officers. Thank you all for your participation. The votes have been counted and I am pleased to announce Bill James and Cliff Lushbough have each been elected to serve a three year term as Vice President. Kurt Beyreis was reelected Treasurer. Please join me in congratulating and thanking these three outstanding members for their willingness to serve and lead our Society forward.

Membership Update

Membership Chairperson Shirley Schmidt submitted the following report: We have concluded our 2012 membership renewal drive and the results are very positive. During the initial collection period 157 members took advantage of our ***Free 1 Year Membership Perk Offer,*** having their dues paid by December 16th. We are excited that this program was so well received.

As of the middle of February we have 234 current members. We have had some resignations due to economic, health and age factors and several members have passed away. We are getting an average of one or two new members per month, and I am very happy about that.

We have had three articles on scales published in *Farm Collector*, and Carol Hayden worked with *Antique Trader* getting an article about ISASC in their publication. We implemented a one-time EQM gift subscription offer and established multiple year memberships, both suggestions from our members. As Membership Chairperson I, and all the officers, want to thank everyone for their response and hope that you continue to enjoy our Society. If you have any suggestions, please feel free to contact me by phone at 810-376-4438 or sat_schmidt@gmail.com.

And the Winners Are…

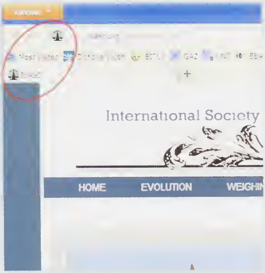
The dues renewal letters were sent out in mid November with an added bonus incentive for paying your dues promptly. We offered a drawing for two free memberships for 2013, if we received your 2012 dues by December 16, 2011. Apparently, this was a great deal, because 157 of our members took advantage of this offer. As far as the mechanics, our Membership Chairperson Shirley recruited Michigan's Sanilac County Sheriff to do the official drawing. She figured it wouldn't hurt to have some "legality" behind it. The sheriff drew the names and then signed and dated his business card.

So it is with immense pleasure that we announce that Barry and Ann Lubin and Dennis Kurlander won the drawing for the two free memberships for 2013. A huge thank you goes out to all who sent in their dues in time to qualify for the drawing. It makes the process of collecting dues much easier on those who volunteer to take on this important and necessary task. Congratulations to Barry and Ann and Dennis!

Be A Mentor

Membership Chairperson Shirley Schmidt requests your help: I am again asking for people to help be a part of a Mentor Group. This would entail a minimum amount of time and consist of making a phone call to our newest members. Just to say "hi, how's it going, do you have any questions, how are your scales, have you dusted them lately, etc."; and possibly to watch over them (people not their scales) at our annual convention and regional get-togethers. In lieu of any responses, I have stooped to emailing people in the same state as the newest members, asked them to make contact and let me know if they could do so. I have received some response at times and do appreciate it. You can get in touch with me via phone 810-376-4438 or email sat.schmidt@gmail.com if you would like to help in this manner.

Website Update



Our Website Editor Carol Hayden sent in this report: Back in 2000 Steve Beare was tasked with developing a website for ISASC. Vice President Jerry Katz introduced Steve to Mike Souders as someone who might be able to help us in that goal. Mike stepped up and became ISASC's webmaster and designed our first website going live in October of that year. Since then, Mike has done a terrific job of maintaining and supporting the site. As a long time antique dealer, specializing in medical instruments of which apothecary scales are a subset, he has a natural affinity with the Society and its interests. Many of you met Mike when he visited us at our convention in Washington, DC.

In May 2010 we went live with our newly designed website with Mike being responsible for the technical development as well as giving design input. Then in early 2011 he again updated our website with the redo of the Scale Tutorial and with his suggestions the tutorial was greatly expanded. Now, we are sad to announce that Mike has decided for personal reasons to pass on the position of webmaster. Not wanting to leave us in the lurch, he recruited his sister Susan Phillips. Susan is extremely qualified and very knowledgeable in web design and support. She has been assisting with the website since June and the transition has been incredibly easy to the point of transparency. As of January Susan is now our official webmaster. She has taken the reins and has continued the quality we strive for with very few hitches. She designed and loaded a favicon for ISASC. A favicon (short for favorites icon and also known as a website or bookmark icon) is used on browsers in the address bar and next to the page's name in a list of bookmarks. It is a step toward branding our website, and keeping us updated with the current trend, as it is commonly used by many businesses and organizations.

On a personal note I have very much enjoyed working with Mike since taking over as editor in 2006. I was a novice in this area when Steve Beare convinced me to give it a try. Mike was extremely patient and giving of his time and advice in helping me take on this new position. I am deeply grateful for his support and friendship over the years. Susan is proving just as easy to work with and I look forward to developing our relationship. So at the same time, thank you Mike for all you have done to advance ISASC into the cyber-world, and welcome Susan to ISASC as our new webmaster.

East Tennessee Regional Meeting

Four scale collectors met on a warm, but overcast November 26, 2011, to meet new friends, exchange scale information and to basically do "scalie" things. Present at the home of Phil Wehman of Chattanooga, Tennessee, were Phil, Bill and Jan Berning and new member Patrick Skidmore. A tour of the Wehman Collection was exciting for all attendees. This was followed by show and tell by Patrick who had lots of interesting scales stashed in his car's back seat and trunk. Later, Phil spread a wonderful sandwich lunch complete with dessert. Phil is no stranger to folks stopping by for a visit and tour of his collection. Recently, he has had the pleasure of welcoming members Ben and Mary Smith and Jim Dietrich and Joyce Glazier. Phil always enjoys the chance to get together with other scalies and is looking forward to seeing everyone in Pittsburgh.

Publicity for ISASC

The December 14th issue of *Antique Trader* featured an article on ISASC with the headline "Odds tipped in their favor as new members weigh options to join scale club". The article gave a brief history and explained the purpose of the Society along with listing the major benefits of membership and giving contact information for joining. It is great free advertising and allowed us to provide information on the upcoming convention in Pittsburgh. We have already had several prospective members contact us after seeing this article.

Bill and Jan Berning report that they had a small display of scales in the narthex of their church for the entire month of November. Scales featured included poultry, egg, grain, cream testing, letter, toy and fishing scales among others. Also included were ISASC rack cards and a copy of *Equilibrium*.

Welcome New Members

It is always a pleasure to see new people choosing to join our enthusiastic members who collect scales, weights and measures. We want to take this opportunity to welcome our newest members:

S. Miller & Mary Louise Harris	Spinnerstown, PA
Jeffery & Nadia Lenorovitz	McLean, VA
Robert & Alyssa Stern	Needham, MA
Rod & Gerry Haynes	Riverside, CA
Robert & Roberta Ustrich	Los Angeles, CA
Kevin Duvall	Clearwater, FL
S. Joseph & Ann Russo	Sands Point, NY
Al & Karen Rockhill	Cherry Hill, NJ
Wayne & Dianne Daniel	San Antonio, TX
Tony McCarthy	Dunedin, New Zealand

We are hoping to meet you in person at one of our various meetings. Please take advantage of the services of the Society, and don't hesitate to ask questions of other members.

In Memoriam

Sadly, we have learned of three members who passed away.

Robert Anderson	Member since 1996
James Duvall	Member since 2010
Shirley Mohr	Member since 1984

Collector's Corner—Sell, Buy and Trade

Member Dick Ebeling is interested in selling the following scales:

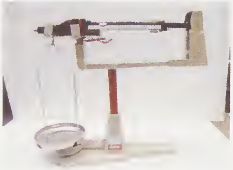
1) Chain-o-matic Balance, Voland and Sons, Model 220-D, Serial M26270, metallic case, chain missing from scale, overall dimensions 17" high, 19" wide, 9 ½" deep, $150 plus shipping.

2) Specific Gravity Balance, Central Scientific, catalog number 7600, in a storage box, 3 ½" high, 9 ½" wide, 7 ½" deep, several parts in individual compartments, likely sold in 1981, inspection tag in case, instruction sheet in box, $50 plus shipping. If interested, please contact Dick by phone at 630-896-4941.

Member Joe Russo wants to sell the following scales:
Three different styles of Ohaus Gram Scales, brand new and in original boxes $85 each, free shipping in the continental US only. Call Joe at 516-883-9100.

1. OHAUS Scale, 1.0 grams- 10-100 grams

2. OHAUS Scale, 10-100-500 grams



3. OHAUS Scale, 10 grams

As you can see, there is a lot of Society activity. We invite you to become involved whenever you can. It is an opportunity to meet people with your same interests, exchange information, brag about your latest purchase, and see some nice scales and weights. If you have something in your collection to share with others, please consider writing about it for Equilibrium. Contact Jan Berning, our editor, for assistance. We have members who would be more than willing to help you. The Pittsburgh Convention is an ideal way to become more involved and meet your fellow members. Hope to meet you there.

UNTIL NEXT TIME

ISASC

EQUILIBRIUM®

QUARTERLY MAGAZINE OF THE INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

2012 ISSUE NO. 2

PAGES 3797 - 3824

Cover Picture

F. A. Thiele of Copenhagen, Denmark made this grain scale of brass and steel with a wooden box, striker and stand for the funnel. Made for the Dutch Market it has a 4 inch long steelyard and a bucket that is 2 inches in diameter by 4 inches tall. When not in use all the implements necessary to test the grain fit neatly into the fine mahogany box.

Thiele was operating his shop at Store Kjöbmagergade, Number 39 in Copenhagen in the later part of the 19th Century.

Bob Jibben Collection

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INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

EQUILIBRIUM is published quarterly in February, May, August and November.

© 2012 International Society of Antique Scale Collectors

ISSN: 0893-2883

International Society of Antique Scale Collectors
Founded September 1976
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Published with the co-operation and support of
ISASC Europe
Founded October 1993

Charity Commissioners for England & Wales No 1037558
www.isasce.com

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Article submissions are preferred in MS Word with Times New Roman Font size 12.
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Coin Scale Boxes Made in and for Spain

BY DR. LUDWIG RAMACHER & FRANCISCO VALLÉS

Part one: Makers and verifiers of coin scale boxes in Valencia

There is not much comprehensive literature about Spanish coin scale boxes even in Spain. The two largest books covering the issue of coin weights that also mention some boxes are those of Mateu y Llopes[1] and of Crusafont i Sabater[2]. Most available information can be found in the small book made for the Museo de Ferias (Museum of the Fairs) in Medina del Campo by its curator Ramos Gonzáles[3]. Zavattoni[4] shows some in his 2003 book about his collection. A few articles have been published on single pieces or peculiar items in EQM before.

We plan to describe and analyse the Spanish coin scale boxes[5] in several articles, covering the different areas of production. Looking at production in Spain first, we know for sure about production in Barcelona, Valencia, Madrid and Sevilla. Most probably in other cities there were makers, but examples are quite rare so far. A great number of coin scale boxes used in Spain were imported. We know of imports from Cologne, Lyon, London and Nürnberg. This subject we will also cover later.

Spanish boxes are generally much more simply constructed than boxes in Germany or Italy for reasons quite easily understood. In Europe there were a great number of foreign coins always used for trade, but this was not the case in Spain, which was so rich at certain times that her gold and silver coins were the international currency, like the dollar nowadays. Additionally, most of the time the legal mass of the gold and the silver coins were the same, allowing the control of both types with just one set of coin weights. Most of the time the use of foreign coins seems to have been prohibited.

Based on very opportunistic reasons, we decided to start with Valencia, simply because the number of makers and verifiers in the 18th and 19th century is easier to cover than in Catalonia, which may be the next one, and we have enough boxes in our hands to make it useful.

Valencia, a town of about 800,000 inhabitants, is situated on the east coast of Spain, as a harbour to the Mediterranean. The known history is more than 2,000 years, founded by Romans and being more than 500 years under Arabic influence (711-1238). It was reconquered for Christianity by Jaime I of Aragon, and therefore came under the crown of Aragon subsequently, for some time as an independent kingdom with its own coinage. It kept some independence and privileges for longer and only lost both after the succession wars in Spain in 1709. During the civil war in Spain in the 1930s, Valencia was for some time the seat of the democratic government. When we talk about Valencia in this article we mean the town.

As in most countries of Europe, the different professions in Valencia were organised in guilds (originally called *germanias* in Valencia). While in other parts of Spain, the privilege to verify scales and weights was given to the silversmiths (*plateros*), as far as we can see, in Valencia this was not the case, and definitively not during the period decribed here. The responsible verifiers were elected by the town council. Those we know of seem all to have been locksmiths (*cerrajeros*), evidenced partly by their addresses in *calle de cerrajeros* a road still existing in Valencia.

The following chapters describe the verifiers and coin scale makers we have evidence of in the 18th and 19th centuries. There is no evidence of makers in Valencia before about 1720. Verifiers (*fiel contraste or mostassaf*, later called *refinador*) were in place from about the 13th century.

The boxes from Valencia look different from those made in other parts of Spain and even different from those made in Catalonia, the neighbouring area and part of the same kingdom for long periods. They differ from those typical Catalan boxes made from plywood and also from the rarer solid wood boxes of Catalunia. Those of the 18th century are reminiscent of French boxes, especially those from Lyon.

The typical composition after 1731, when a royal decree of Felipe V changed the system of coinage, till the beginning of the 19th century, is:

Gold Coin	Silver Coin	Inscription on Weights	Mass [Grams]
Onza	Real de a ocho	Vooo	27.06
Media Onza	Real de a cuatro	oooo	13,53
Doblón	Real de a dos	oo	6,77
Escudo	Real	o	3,38
Medio Escudo	Medio Real	½	1.69

Till now we know only three boxes definitively made in Valencia before 1731. The box in Figure 1 is the earliest one made by Ioseph Planes. Its construction is similar to the later ones but made without the "½" coin-weight. It is the only one we know of with a handwritten label.

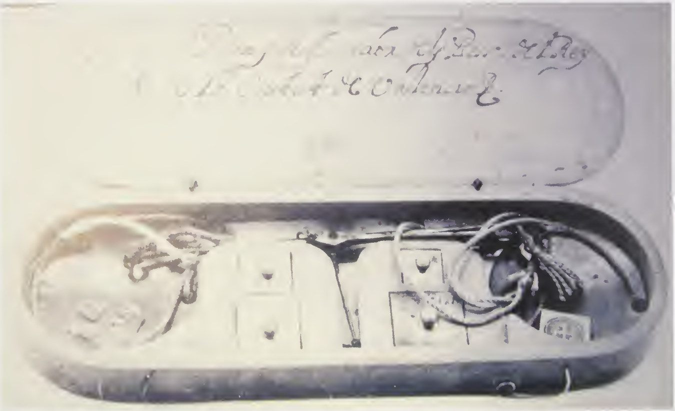


Figure 1. ↗↗ Box made for the coinage before 1731[6].

All the boxes were made from solid wood, with special holes for the full coin weights. The coin weights from the Planes family and José Puchol are all truncated pyramids with a knob.

The boxes of the Planes family and of Puchol do not have a special container for the fractional weights, the reason why they are missing most of the time.

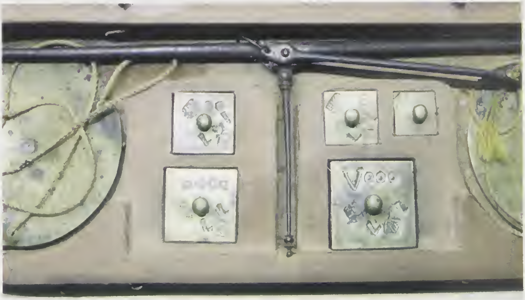


Figure 2. ➤➤ After 1731 five coin-weights were obligatory.

The later boxes have a container for fractional weights and can be found with at least some surviving. In the 19th century a variety of round weights with a knob were used. The fractional weights typically represent values of 16, 8, 4, 2 and one 'granos[7]' (grains in the Spanish weight system).

While names and inscriptions of coins did change with the several kings, the mass of the important gold and silver coins remained unchanged at least till the reign of Isabella II (1730-1768). The composition and denomination of the coins and some of the coin weights changed seriously with the coinage of Isabella II after 1848[8]. It is unnecessary to list all the different coins. The most important change for the boxes was the introduction of the *5 Duro/100 Reales* piece which was first minted in 1850, a gold coin with 8,34 g. After that year it can be assumed that the boxes with six coinweights started to be produced.

Maker & Reference[9]	Garces FV 54	Garces FV 30	Garces y Gambau FV 34	V. de Garces FV 41 (LR 38 similar)	Adrian GZ	Lavern ia FV 88	Labern ia FV 42	Menay a GH	Menay a FV 39	Menay a FV 40+ 49 (LR 40 similar)
Number of CW	5	5	5	5	5	5	5	5	6	6
27,06	vooo JG	vooo	vooo	vooo	---	XVI	xvo	vooo	vooo	16
13,53	vooo JL	oooo	oooo	oooo	oooo	VIII	vooo	ooo	oooo	8
8,34	nf	nf	nf	nf	nf	nf	nf	nf	100 Rs	5
6,78	oo JG	oo	oo	oo	---	IIII	oooo	oo	oo	4
3,39	o	---	---	o	o	---	oo	o	o	2
1,69	no sign	---	---	no sign	---	---	o	no sign	---	1

The boxes from Valencia all seem to have had a label describing who made them in which year (in most cases) and which kind of formal profession the maker had. The label has not always survived, but we have enough evidence. They do not have a description for how to use them, as can always be found in Catalan boxes. If such instructions have been included as additions, we do not know.

The scales were always made from steel with swan neck endings. The hinges were of very simple construction as can be seen in the photos. The system did not change during the time described. There were always two clasps in the front, a simple type in the 18th century, and more elaborate in the 19th. We have the impression that the colour of the strings made from silk was typical for the maker.

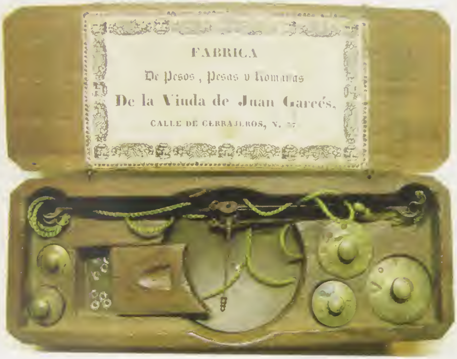


Figure 3. ←← This type was used in the beginning of the 19th century.

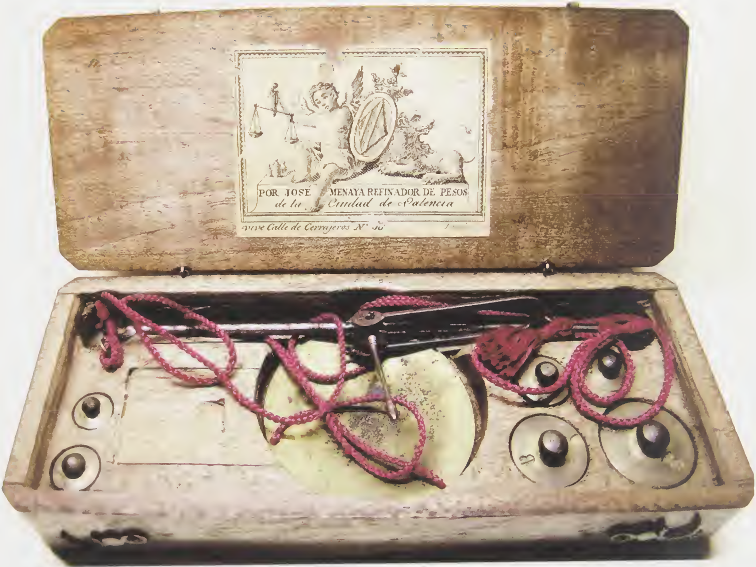

POR JOSÉ MENAYA REFINADOR DE PESOS
de la Ciudad de Valencia
vive Calle de Cerrajeros N°

Figure 4. A box made for the coinage of Isabella II after 1848/1859.

It is interesting to note that some labels of the verifiers show the shield of Valencia as well as that of Spain (Planes y Ferrer and Garcés y Gambau) while others show only the shield of Valencia (Planes, Garcés, Labernia, Menaya). We would think that the first two had additional obligations mandated by the king and not only by the city. Further studies will hopefully bring more evidence, also due to the fact that also Ioseph Planes the father mentioned both king and city on his labels.

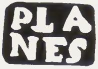
We can cover most of the time in these two centuries with verifiers, but have noted some gaps, e.g. between about 1784 and 1810, where we have no written evidence in the form of labels and documents. No boxes are known especially made for the coinage of the French occupation (1808-1813).

The Planes family

Mateu[1] and Crusafont[2] mention the family, describing the situation early in the 1730s when Ioseph Planes was asked to continue as verifier for Valencia, but instead he asked to nominate his son Ioseph Planes y Ferrer, which was approved by the town council on 10.01.1732 and approved by a royal decree probably dated 6.11.1739[10].

More information is not given by Mateu and Crusafont. Why did the father ask to nominate the son? How long had the father been verifier before? When did the son start to work as verifier, 1732 or only 1739?

We studied the available boxes and literature and can say that although certain questions remain open, we found further answers:

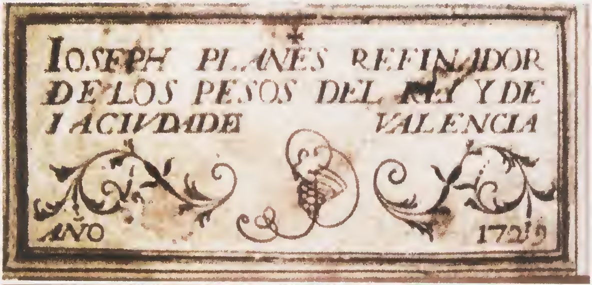
Name	Formal Title	Mark	Proven Years of Work
Ioseph Planes	Refinador de los pesos del rey y de la cuidade Valencia	Crusafont mentions a P, which we never found. Most probably he used the same mark as his son.	1727-1758
Ioseph Planes y Ferrer	Refinador de pesos y pesas[11] por el Rey y la Ciudad de Valencia		1732-1784[12]

As the brother of Ioseph Planes y Ferrer, the silversmith Tomas Planes was born 1703[13], we can assume, that Ioseph was born in the same decade. Due to his first name, Ioseph was probably not the eldest son. We calculate that their father was probably born around 1675 or even earlier, so perhaps he refused to work on as refinador (del pesos del rey y de la ciutat de Valencia) (see Figure 1) due to his age[14]. It is most probable that the father worked as verifier already long before 1727, but that can not yet be proved by written evidence. The son, although his nomination was approved by the king only in 1739 must have worked as verifier earlier, as labels from 1734 are known to us.

Father and son have used from about 1732, the label shown below, in which they claim themselves to be refinador till the end of their working time. This is one remaining uncertainty. On the other hand we clearly have the impression that the city had more than one verifier during other periods.

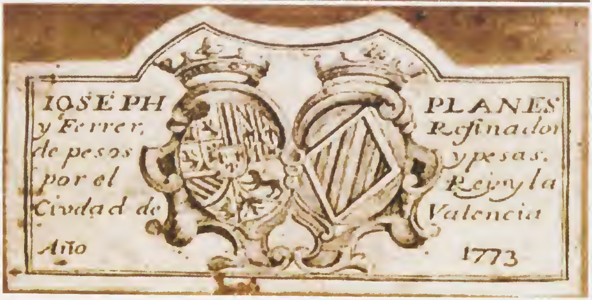
While the form of the boxes of father and son are similar, the labels inside the boxes are quite different. Both have used exactly the same kind of label during their lifetime, on which only the two first numbers were printed, the last two were added in handwriting.

Made in 1736, the prehistorical museum[15] in Valencia has a box similar to that in Figure 8 made by Ioseph Planes.



IOSEPH PLANES REFINADOR
DE LOS PESOS DEL REY Y DE
LA CIVDADE VALENCIA
AÑO 1729

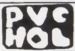
Figure 5. ➶➶ Box label of Ioseph Planes, 1729.



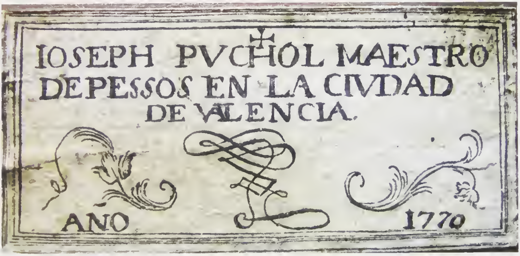
IOSEPH PLANES
y Ferrer, Refinador
de pesos y pesas.
por el Rey y la
Civdad de Valencia
Año 1773

Figure 6. ➶➶ Box label of Ioseph Planes y Ferrer, 1773.

Not much is known about Ioseph Puchol personally, besides the few coin scale boxes we own or know. On the label he declares: *Ioseph Puchol Maestro de pessos en la ciudad de Valencia...* This implies that he was a maker of scales, but not a verifier. Consequently the weights in the boxes we own were verified by PLA/NES, as Puchol was working partly at the same time as Ioseph Planes y Ferrer. On the other hand we know two boxes where the weights are marked with his own mark (as a maker?).

Name	Formal Title	Mark	Proven Years of Work
Ioseph Puchol	Maestro de pessos en la ciudad Valencia		174x-1770. (There is one label which can be read 1751, 1781 or 1791)

Interestingly his label is very similar to that of Ioseph Planes (the father), perhaps the curly P monogram in the center of the label is a signature of both Planes and of Puchol.

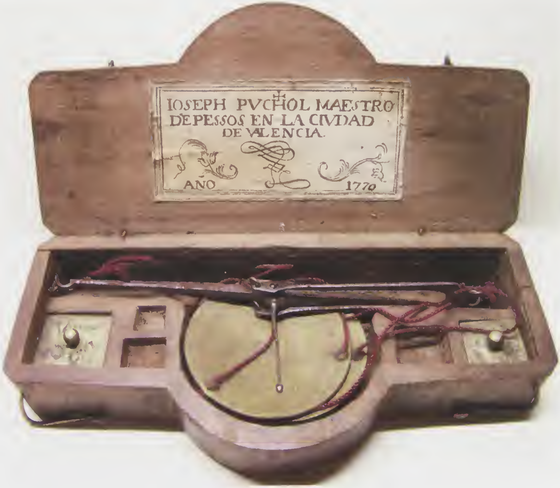


IOSEPH PVCHOL MAESTRO
DEPESSOS EN LA CIVDAD
DE VALENCIA.
ANO 1770

Figure 7. ◂◂ Box label of Ioseph Puchol.

Recently we found a box by Ioseph Puchol looking different from the usual ones of that time dated 1770.

Figure 8. ▸▸ Unusual box made by Ioseph Puchol



IOSEPH PVCHOL MAESTRO
DEPESSOS EN LA CIVDAD
DE VALENCIA.
ANO 1770

The Garcés family

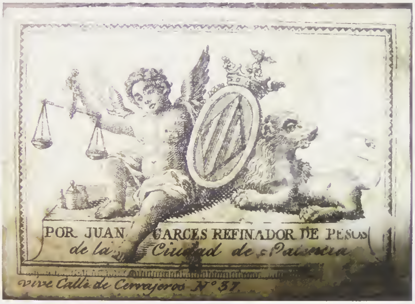
In contrast to most of the 18th century, by the beginning of the 19th century it seems to have been unusual to write a year of production on the label.

Therefore, our knowledge about the working period of the Garcés family is partly from different sources. We can reasonably assume, but not really prove that Juan Garcés and his wife (Viuda de Garcés=widow of Garcés) are the parents of Juan Garcés y Gambau. The fact that a widow took over the fabrication seems to have been quite ordinary in the Spain of this era, the son being probably too young to do so at the time.

For Juan Garcés y Gambau, we have some labels with years noted plus him being mentioned in literature. For all three 'calle de cerrajeros, 37' is mentioned as address.

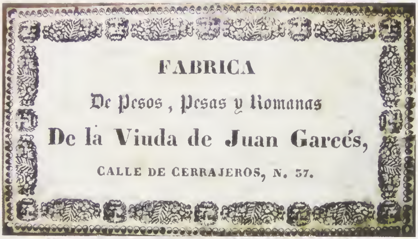
Name	Formal Title	Mark	Proven Years of Work
Juan Garcés	Refinador de Pesos de la ciudad de Velencia	JG	1811[16] (time of the French occupation, he may have had problems afterwards due to that).
Viuda de Juan Garcés	Fabrica de pesos, pesas y romanas	V. DE GARCES	No date known from a label or by literature.
Juan Garcés y Gumbau	Refinador de pesos y pesas por el Rey y la Ciudad de Valencia	CAR CES	1822 -1834 (or 38).[17]

The form of the weights as well as the form of the boxes changed between the 18th and 19th century. Boxes got smaller, rectangular (with cut-off corners) and started to provide a special container for fractional weights. From the mark of the widow, we know that, at least in the time of her production, also apothecary weights were part of the program.



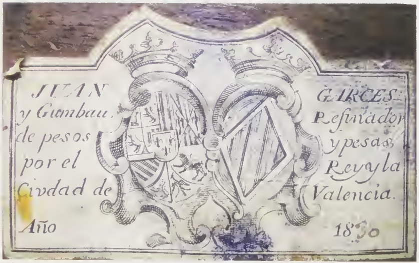
POR JUAN GARCES REFINADOR DE PESOS
de la Ciudad de Valencia
vive Calle de Cerrajeros N° 37.

Figure 9. Label of Juan Garcés.



FABRICA
De Pesos, Pesas y Romanas
De la Viuda de Juan Garcés,
CALLE DE CERRAJEROS, N. 37.

Figure 10. Label of Viuda de [widow of]Juan Garcés.



JUAN GARCES
y Gumbau. Refinador
de pesos y pesas
por el Rey y la
Civdad de Valencia.
Año 1830

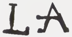
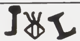
Figure 11. Label of Juan Garcés y Gambau.

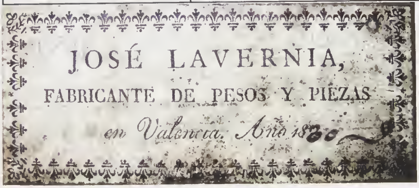
While Juan Garcés y Gambau used a similar label to Ioseph Planes y Ferrer, in both cases showing the shields of Spain and of Valencia, his mother used a simpler label, just as maker. Juan Garcés the father's label is again different showing only the shield of Valencia. His type of label can be found again with those of Jose Menaya. Both labels show in the bottom right the word Rocafort. The most logical explanation would be that this is the signature of the engraver Thomas de Rocafort y López (1798 – 1827). One may wonder how that fits with the use of these labels by Jose Menaya, but if it is true that Menaya started working in the 1820s as we assume and the label remains unchanged over a longer period, that would be logic enough.

Lavernia, José and Labernia, Francisco

'Confused' could best describe of our knowledge about the following people. Are they two or three? When did they work?

To explain our problem it is necessary to know that "b" and "v" have in certain languages in Spain a quite similar pronunciation.

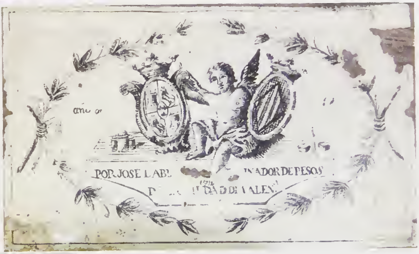
Name	Formal Title	Mark	Proven Years of Work
Jose Labernia	refinador de pesos de la Ciudad de Velencia		1830-1831
Jose Lavernia	fabricante de pesos y piezas en Valencia		1830
Francisco Labernia	refinador de pesos de la Ciudad de Velencia		In the 1830s?



JOSÉ LAVERNIA,
FABRICANTE DE PESOS Y PIEZAS
en Valencia. Año 1830

Figure 12. ↖↖ Label of José Lavernia.

Figure 13. ↗↗ Label of José Labernia.



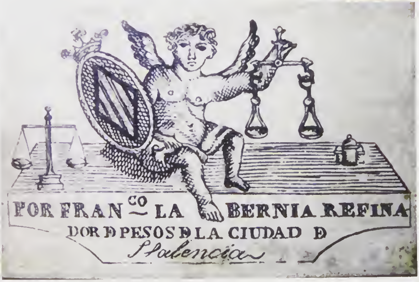
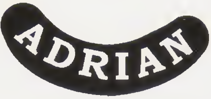

POR FRAN^CO LA BERNIA REFINA
DOR D PESOS D LA CIUDAD D
Valencia

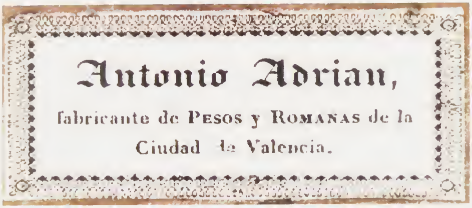
Figure 14. ↖↖ Label of Francisco Labernia.

Adrian, Antonio

It is always a bit strange that information about makers in the 19th century seems to be more difficult to find than about those from 18th century. Adrian is such a case. Nothing is on the internet. We know only one box and a few weights having his mark.

Name	Formal Title	Mark	Proven Years of Work
Antonio Adrian	Fabricante de Pesos y Romanas de la Ciudad de Valencia Refinador de pesos de la ciudad de Valencia[18]		

The composition of the only box we know for sure is similar to those of the Garces family. That would date him to the 1830s, our best estimate.



Antonio Adrian,

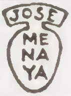
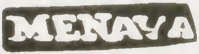
fabricante de Pesos y Romanas de la

Ciudad de Valencia.

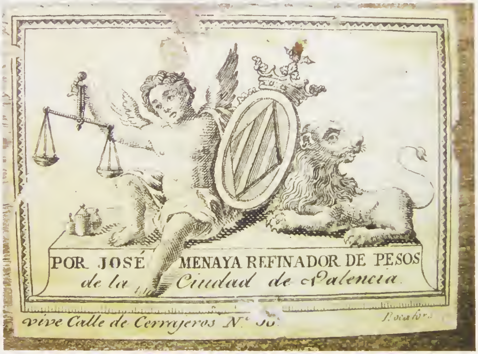
Figure 15. ◄◄ Label of Antonio Adrian[19].

Menaya, José

Menaya is already mentioned by Lavagne[20] but without a precise period (he only says early 19th century). We know two marks for Menaya as shown in the table. That would not immediately mean that this is more than one person, as we know of other verifiers with more than one mark, but it is possible.

Name	Formal Title	Mark	Proven Years of Work
José Menaya	Refinador de pesos de la ciudad de Valencia	 	±1820 till > 1848; the company must have existed at least till 1900 as we know from advertisement

The earliest proof of Menaya we have in our hands on weights is in a box made by the widow of Juan Garcés, where we can find the second type of mark. This should be around 1820. On the other hand we own coin scale boxes being definitively much later with weights marked with the first type. These boxes were not dated, but have to be after 1848, as they contain a weight for the 5 duro coin.



POR JOSÉ MENAYA REFINADOR DE PESOS
de la Ciudad de Valencia.
vive Calle de Cerrajeros N.º 30.

Figure 16. ►► Label of José Menaya.

In addition, the Menaya family can be followed as producers of industrial scales until at least 1912, where the owner still has the name José Menaya. Therefore there has been more than one José Menaya in that family business making and/or verifying coin scales or weights.

In the beginning, 'calle de cerrajeros 10' is mentioned as the address. It remained the seat of the family and company until the beginning of the 20th century, when they used to write 'calle de cerrajeros 8 – 10'.

Malabouche, Francisco

We know that Malabouche came originally from France, and that he was managing with Spanish partners a production of scales of industrial size at 'portal nuevo 11'. The factory was founded in 1852 and quickly gained prizes at exhibitions. The company can be followed over at least four owners, Francisco till 1885, Guillermo till 1891, Fernando till 1910 and finally the widow of Fernando Malabouche[21].

One coin scale box made in his factory is published in Crusafont (p 171)[2]. On the label he referred to the metric system, so the box could even be made after 1871. The box looks like the later type of boxes produced by Menaya, so it was made for the coinage of Isabella II.

It is remarkable that this late coin scale box follows the mode of construction started decades before.

Name	Formal Title	Mark	Proven Years of Work
Francisco Malabouche	Fabrica di pesos y medidas	none	1852-1885

Acknowledgements:

We want to thank Antonio Lopez (Madrid), Manuel Gozalbes (Valencia), Guido Zavattoni (Milano), Pedro Martinez Echarri (Mallorca) and Diana Crawforth-Hitchins for their kind support of our work.

Notes & References:

1. Felipe Mateu y Llopis, *Catálogo de los ponderales monetarios del museo arqueológico nacional*, Madrid, 1934
2. M. Crusafont i Sabater, *Pesals Monetaris de la Corona Catalanoaragonesa*, Barcelona, 1999
3. Fernando Ramos González, *Instrumentos para el peso y el cambio de moneda   Catalogo de balanzas, caja de Cambista y poderales, Medina el Campo*
4. Guido Zavattoni, *Bilance e strumenti per pesare le monete* (metà XVII – XX secolo) di una collezione privata, Milano, 2003
5. As far as we can say till now, coin scale boxes from Spanish production appeared mainly after 1731, with some exceptions in Valencia and Barcelona. Before that, the use of single coinweights for all kind of gold and silver coins is proven back to the 15th century.
6. Copyright of the foto: A. Fernández, R. Munoa, Jorge Rabasco, Enciclopedia de la Plata (Silver) Espanola y virreinal americana, Madrid, 1985
7. One *grano* is equivalent to 0.049 g.
8. It is difficult to get a clear feeling for the combination of the complicated coinage system of Isabella II and the rather simple approach of the coin scale boxes. We have to say that we are not yet really satisfied about this.
9. FV: Francisco Valles, GH: Gerd Höxtermann, GZ: Guido Zavattoni, LR: Ludwig Ramacher; nf: not foreseen no sign: the weight is not marked
10. *Boletin de la Sociedad Castellonense de Cultura*, 1933, p 152 ff
11. The term *pesos y pesas* may sound strange, but what this wants to say is that he was verifier for *equal arm beam balances* (pesos) and weights (pesas). Probably *pesos* was used here in a more general way for all kind of balances.
12. In the year 1784 several members of the Planes family (young and old) died. We do not know for sure about Ioseph Planes y Ferrer, but it could easily be that he also became a victim of the malaria epidemic that hit Valencia in that year.
13. *Los plateros valencianos en la edad moderna* (siglos XVI-XIX), Valencia, 2005; Documentation on silversmiths in Spain is much more easily accessible.
14. Guido Zavattoni made the remark, that in certain areas (he knows for sure for Naples) the profession as verifier had to be purchased, and that the father may have done so for the son here. We can not exclude that at all, we simply do not know how the office of the verifier was awarded by the city.
15 We have to thank Manuel Gozalbes the curator for coins of the Prehistorical Museum of Valencia for his kind co-operation. www.museuprehistoriavalencia.es
16. *El Ayuntamiento de Valencia y la invasión napoleónica*, 2004; Juan Garces is listed as "contraste de pesos" for 1811.

17. Beside some dated labels, we found him mentioned in: *Guia de naturales y forasteros ... 1828; traite comparative de monnaie, poids et mesures...., 1832*, which can be found via google books
18. We have no photo of this label, but saw one example in the Museum of the town of Valencia.
19. Foto and further information courtesy of Guido Zavattoni
20. F.G. Lavagne, *Balanciers Etalonneurs Leurs Marques Leur poincons*, Montpellier, 1981
21. Research of Antonio Lopez in catalogues of exhibitions and yearbooks

Weighing at the Banks 4: The 1950s and 1960s

BY NORMAN BIGGS

The post-war British coinage

The conclusion of the war of 1939-45 heralded a significant change in the circulating currency. The 'silver' coins, which had contained 50% alloy since 1920, were finally purged of all traces of silver in 1947. This step meant that there was no longer any reason to weigh coins in order to establish their intrinsic value: henceforth weighing was simply a quick method of counting. The weighing was usually done after the coins had been put in paper bags purporting to contain a specified monetary amount.

The bags illustrated in Figure 1 represent the denominations used most frequently at the banks in the post-war era. The '£5 silver' one had long been familiar, and since the masses of the silver coins had not been altered by the changes in their alloy, the weight-value relationship meant that (in theory) silver coins of different denominations could be weighed together.

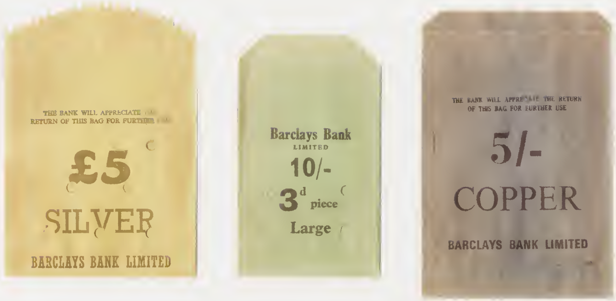

THE BANK WILL APPRECIATE THE RETURN OF THIS BAG FOR FURTHER USE
£5
SILVER
BARCLAYS BANK LIMITED
Barclays Bank
LIMITED
10/-
3d piece
Large
THE BANK WILL APPRECIATE THE RETURN OF THIS BAG FOR FURTHER USE
5/-
COPPER
BARCLAYS BANK LIMITED

Figure 1. Bags for £5 in 'silver', 10s in 3d pieces, and 5s in 'copper.'

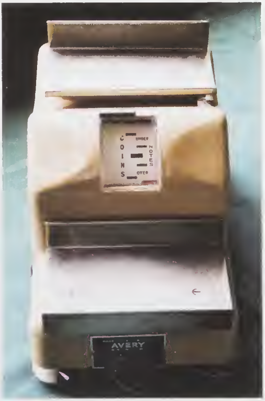
The bag for 'Large 3d' pieces was intended for distinctive 12-sided coins made from a nickel-brass alloy, first issued in 1937. They were usually referred to as threepenny-bits. The bag for '5/- copper' was intended for pennies, halfpennies and farthings, which had in fact been made of bronze since 1860. Since the 'copper' coins did not satisfy the weight-value relationship, these bags could not be checked by weighing and, indeed, no weights related to them are known. However the Salter No. 53 Coin Checker, as described in Part 3 of this article, continued to be widely used, and could be adapted for checking pennies. In 1954, the same firm also advertised their Model No. 240, which was able to weigh up to £100 in silver, £5 in pennies, and £20 in threepenny pieces[1].

Weighing coins and bank notes

The use of bank notes increased significantly after the disappearance of gold from circulation in the war of 1914-18. The widespread acceptance of this form of token currency had profound economic implications, for example regarding the control of the money supply[2]. From 1928 onwards, the issuing of notes was the responsibility of the Bank of England. The great majority of them were in the denominations of ten shillings, one pound, and five pounds, the last being fairly scarce. Collectors of bank notes recognise three Series that circulated in the 1950s and 1960s, as listed in the following table[3].

	DENOMINATION		
SERIES	**10s**	**£1**	**£5**
A (Britannia)	1928-1962	1928-1962	1928-1961
B (Helmeted Britannia)	-	-	1957-1967
C (Portrait)	1960-1970	1960-1979	1963-1973

In due course the banks decided that it would be convenient to check bundles of notes by weighing them, although generally this would only be done in circumstances where fraud would be detected at a later stage. Consequently, new types of bank scales began to appear in the 1950s. They were specifically designed so that both coins and notes could be checked on the same machine, and the emphasis was on speed rather than accuracy.



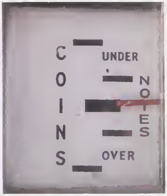


Figure 2. [illegible] Avery's Model 1213.

In 1957 Avery's were given the registration number 884065 for the design of their Model 1213 (Figure 2). It was intended to be used by large coin-handlers, such as the railways, as well as the banks. The machine was supplied with brass cylindrical weights, made by turning sections of cylindrical rod, rather than by the traditional method of casting. The usual denominations were: £5 in silver, £10s in 'bronze' (which was the term used by the banks for the threepenny-bits), 100 £1 notes, and 100 10s notes (Figure 3). A new feature was that the weights could be adjusted by putting lead shot in an interior cavity, sealed by a large screw in the base. This method of adjusting the weights was legal because they were technically not for use in trade, and these weights were not subject to inspection and verification, for the same reason.

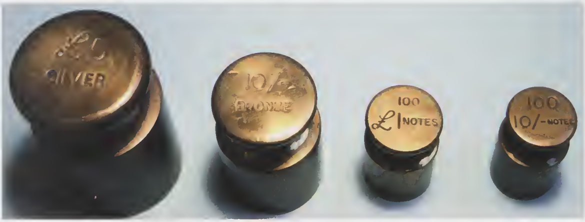


Figure 3. [illegible]. Cylindrical brass weights used with the Avery machine.

Another type of scale intended for checking coins and notes was patented in 1959 (Figure 4). According to the specification[4] it was intended to provide ... *a weight-checking balance which is sensitive only to small discrepancies from a given weight, and which provides a quantitative indication of the amount of discrepancy.*

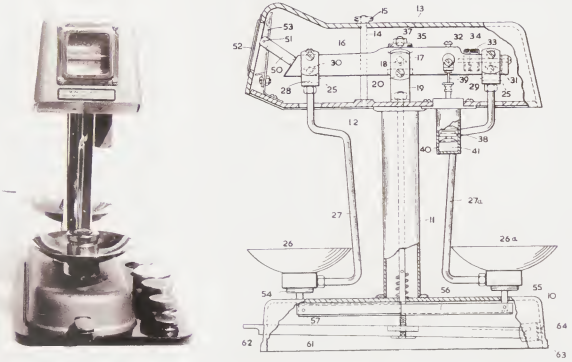
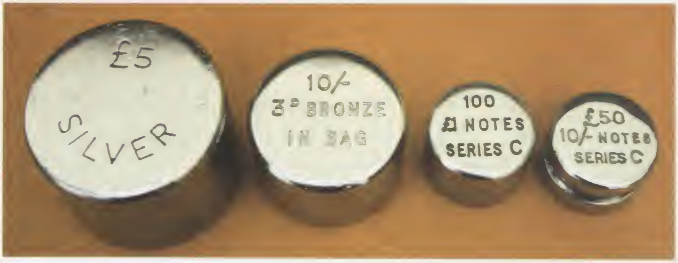


Figure 4. ◄◄ The Omal Universal Money Checker.

This scale was sold as the Omal Universal Money Checker, and it was supplied with weights made of iron. The earliest ones (Figure 5) were chrome-plated cylinders, with a screw-capped cavity for adjustment in the base. Later, other types were made, including some that were suspended by a hook. These will be described in the next part of this article.

Figure 5. ➤➤ Plated iron weights for use with the Omal machine.



The little sixpence

The sixpence was the smallest of the silver coins, the old silver threepence having been displaced by the brass threepenny-bits in the 1930s. In practice, it was observed that these little coins suffered disproportionately from wear in circulation. Data given by Newman[5] in 1953 indicated that the annual percentage weight-loss for a sixpence was three or four times greater than that for a halfcrown. In practice, this meant that bags of 'mixed silver' might be unduly affected by the presence of sixpences, and accordingly the banks sometimes handled sixpences separately. This could be done in two ways: either by checking bags of £5 in sixpences at a slightly lower weight (Figure 6), or by using bags for £1 in sixpences and weights for checking them (Figure 7).

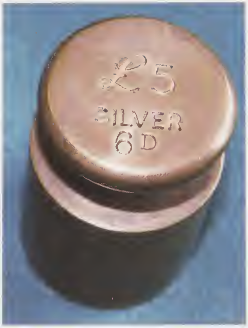


Figure 6. ◂◂ A weight for checking £5 in sixpences.

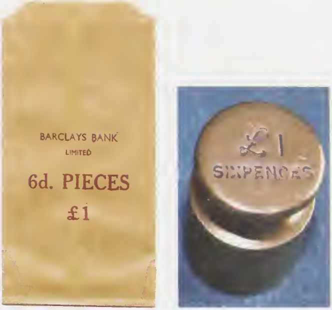


Figure 7. ▸▸ A bank bag for £1 in sixpences and a corresponding weight.

The unofficial standards

The following table summarizes the main denominations of weights used by banks for checking coins and notes in the mid-1960s. It must be remembered that these 'standards' were unofficial and variable. The mass stated in the table is inferred from examples, and is intended only as a very rough guide.

DESIGNATION	COINS/NOTES	MASS	DATE WITHDRAWN
£5 silver	2/6, 2/-, 1/-, 6d	566 g	1971 (but see later)
10/- bronze	3d (12-sided)	272 g	1971
£5 sixpences	6d	562 g	1980
£1 sixpences	6d	112 g	1980
100 £1	£1 series C	92 g	1979
100 10s	10s series C	79 g	1970

Unlike coins, the mass of notes tends to *increase* during circulation, as the notes become dirty. At one time, each individual branch of a major Birmingham bank had its weights adjusted according to the observed mass of a sample of notes paid in to that branch. In some areas, the notes were significantly dirtier than in others, apparently as a result of them being used in pubs.[6] Of course, there are many other reasons why weights that have survived may differ from the norm. For example, when new types of notes were introduced, weights originally intended for checking one series could have been re-adjusted for checking later ones.

A further complication is that some Omal weights were marked with the word RE-ISSUE, signifying that they were to be used to verify that coins or notes were close to the full weight, and could be returned to circulation (Figure 8). Clearly, these weights should have been slightly heavier than the ordinary ones, but here too there are many reasons why surviving examples may not satisfy that criterion.

In the mid-1960s, the UK belatedly decided that it would change to a decimal currency. From the collector's point of view, this was a good move, as it led to many new types of bank weights. These will be described in the next part of this article.

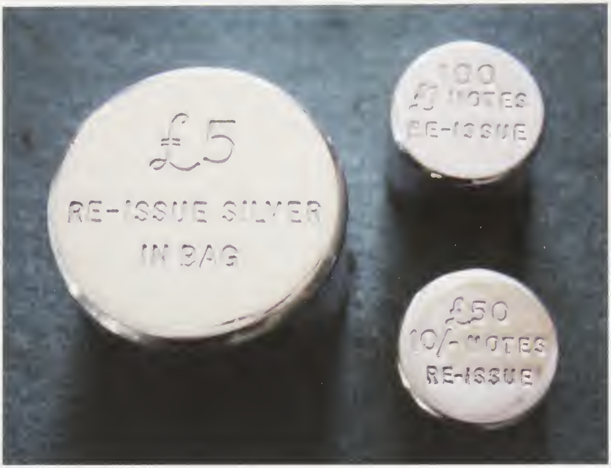
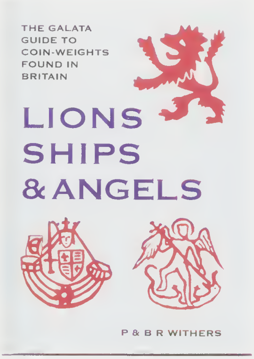


Figure 8. ↗↗ Some RE-ISSUE weights.

References

1. Salter & Co. Ltd. *Salter Spring Balances*. West Bromwich, 1952. See p.24, and the firm's Home Trade Price List 1954, p.8.
2. R.S. Sayers. *Modern Banking*. Oxford: University Press, 1938. See pages 117-127.
3. V. Duggleby. *English Paper Money* (7th edn.) Surrey: Pam West, 2006.
4. *Patent Specification 823724*. Application dated 12 September 1956, published 18 November 1959. The patent was granted to Universal Scales Limited of Bubbenhall in Warwickshire, but the machines were marketed as the Omal Universal Money Checker. The Omal company became part of the Volumatic group in 1988.
5. W.A.C. Newman. *British Coinage*. London: Royal Society of Chemistry, 1953.
6. R. Myers, personal communication.

Book Review


THE GALATA GUIDE TO COIN-WEIGHTS FOUND IN BRITAIN

LIONS SHIPS & ANGELS

P & B R WITHERS

Lions Ships and Angels: The Galata Guide to Identifying Coin-Weights Found in Britain by P. & B.R. Withers. Published by Galata Print Ltd, Llanfyllin, Powys, 2011. Hardback: ISBN 978-1-908715-00-5, 96 pages, 570 colour photographs, A5. Available from www.galata.co.uk, £30 plus postage.

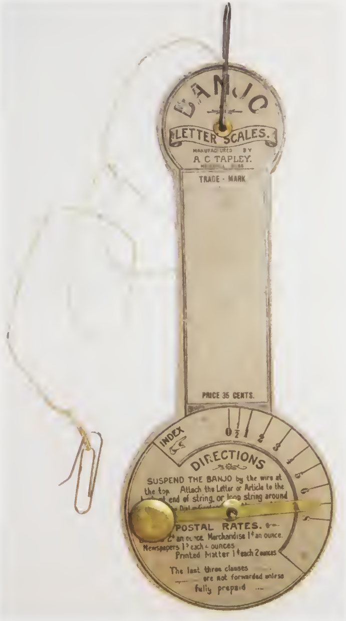
Paul and Bente Withers are the authors of the now-classic Corpus of British coin-weights, published in 1993. That book stimulated a great deal of interest in these fascinating objects, among both collectors and scholars. In 1995 the Withers produced the first edition of the book under review, intended to be a handy guide to identifying the objects, with the additional feature that it covered the weights made abroad that are frequently found in Britain. They relate that the book sold slowly at first, but in due course there was a sudden spurt in sales, as metal-detectorists and FLOs (Finds Liaison Officers) came to recognise its worth. It is often quoted in the records published on the website of the Portable Antiquities Scheme.

The first edition has been out-of-print for some years, and this revised and enlarged edition is very welcome. The 570 photographs are printed in colour, which adds greatly to the attractiveness of the book. Furthermore, as it is now in a hard cover, it will grace any bookshelf. The authors have simplified a mass of material in such a way that it can be easily comprehended, but is not distorted or trivialised. This is an art based on their deep knowledge of the subject. In addition to the sections based upon design features, there are useful lists relating to Irish coin-weights, continental makers' marks, countermarks, and so on. In summary, a little gem of a book, and ISASC should be proud that the authors are members of our Society. NORMAN BIGGS

The Banjo Letter Scale

BY PETER LAYCOCK

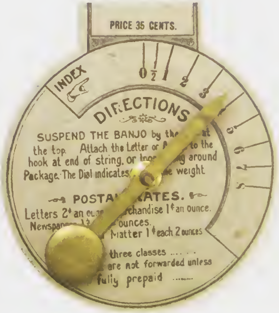
I recently bought on eBay a most unusual postal scale; the "Banjo Letter Scale" which was manufactured by a chap named A. C. Tapley from Haverhill Mass. This scale is primarily made of a thick cardboard and I would guess that it dates back to the early twentieth century. It is remarkable that a scale made from cardboard has survived over the past one hundred years in such good condition. The only imperfections are some slight staining and a few scratches on the printed area at the top.

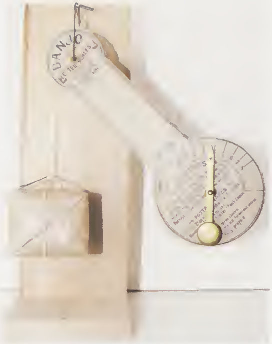


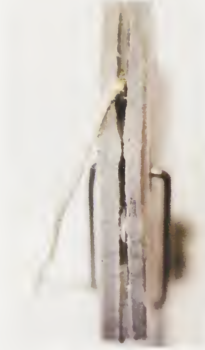
The body of the scale is 8½ inches long and 3¼ inches at its widest point. Portions of the scale are made of multiple layers of cardboard. The cardboard is 3/32 inches thick, the top circular area where "Banjo" is printed is three layers that together measure ¼ inch and the area to which the indicator is attached is two layers thick. The brass poise-pointer pivots around a brass sleeve and is held in place by a rivet-like device. The steel hanging clip also rotates around a brass sleeve.

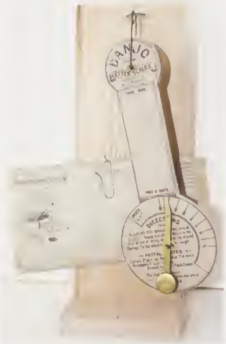
Now to the most interesting feature of the scale; the string which is 19½ inches long has a specially designed paper clip attached, into which one would put the letter. Note also a knot on the string 4 inches higher than the paper clip. This is not a mistake created by some one's carelessness, its purpose will become clear as we demonstrate how the scale was used. The length of the string allows one to weigh letters with the string in one position or to weigh small parcels by wrapping them with the full length of the string. Quite unique, a quasi dual-purpose hanging pendulum scale, who would have guessed?

The directions seem reasonably straight forward: *SUSPEND THE BANJO by the wire at the top. Attach the Letter or Article to the hook at the end of the string, or loop string around the Package. The Dial indicates the weight.* When weighing a small parcel by wrapping the string around the package, the scale worked well with the parcel and the dial being at roughly the same level. However, as I continued to follow these instructions, it occurred to me that it was difficult to read the weight with the letter, which was hanging at the full length of the string some 20 inches below the dial. It was then that I discovered the knot four inches from the hook, perhaps put there by the manufacturer or by someone else,

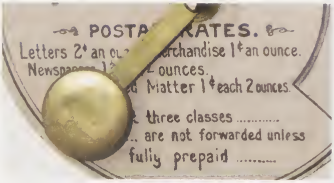


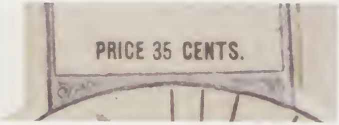




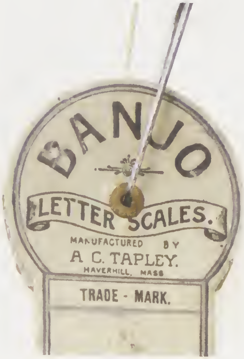


trying to find a way to make the scale more 'user friendly.' The string is fastened in the middle of the top; as mentioned earlier the top is three pieces of cardboard glued together, the center piece is only two thirds the size of the outsides which creates a channel through which the string can be inserted. When inserted, the knot keeps the string in place so that the letter, now on a four inch string, is at roughly the same height as the dial. The mystery of the knot is solved.


POSTA RATES.
Letters 2¢ an o merchandise 1¢ an ounce.
Newsp ounces.
d Matter 1¢ each 2 ounces.
three classes ....
.. are not forwarded unless
fully prepaid ....



Dating this scale is more of a challenge. The postal rates on the scale indicate that letters of one ounce or less could be mailed for 2 Cents. Unfortunately this rate was in effect from 1885 to 1932 leaving quite a wide window. Secondly the indicated price for this scale is 35 Cents, I would expect that one could buy quite a bit more with 35 Cents in 1885 than in 1933, leading me to think that the date of this scale is closer to the 1933 date.



There is no indication of any patent information and a search of the US Patent records for 'Banjo Letter Scales' and 'A. C. Tapley' came up empty. A similar search of trade mark registrations yielded the same results. Looks like Tapley had good intentions but did not follow up on either a patent or a trade mark.

But what about this guy Tapley? With the help of our good friend Steve Beare we have discovered the following. In the Tapley Genealogy, published in 1900, we find that Arthur Childs Tapley was born in Frankfurt, Maine on Dec. 18, 1842, and that he married Mary F. Campbell April 28, 1863. For some period of time he prepared and sold a tonic, Davis' Celebrated Catarrh Remedy, in Lawrence, Mass., close to Haverhill. I'm guessing it had a good dose of spirits. He took out an ad for this in an 1868 *History of Lawrence.*

The 1880 census shows him living in Melrose, Mass with his wife and three sons and he was employed as a baggage master. By 1883, he was an agent for Travelers insurance, still living in Melrose, Mass. By the end of

1885, he was still an agent for Travelers, but now living in Haverhill. One of his best customers for Davis' remedy was a ticket agent for the Boston and Maine Railway and by 1887 Tapley was the Boston and Maine ticket agent for the city of Haverhill, a position which he held until at least 1907, when he likely retired at the age of 65. No doubt he probably had a few bottles of Davis' remedy conveniently placed on the ticket counter as a service to his sick customers, and perhaps even a display of the Banjo Letter Scale.

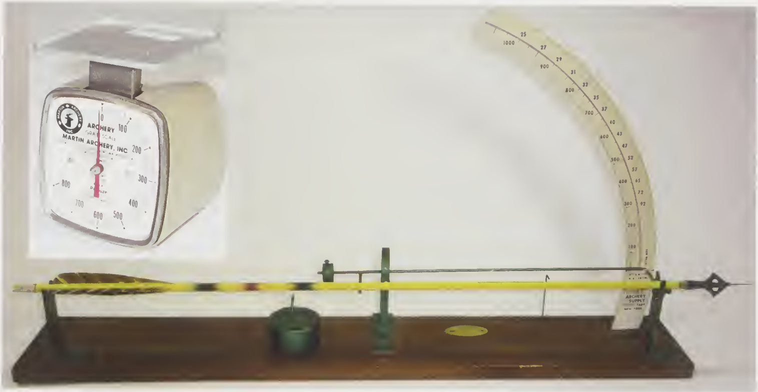
Tapley probably developed the Banjo Letter Scale in his spare time as a hobbyist inventor. Given his employment background, it is unlikely that he would have had the equipment to actually manufacture these scales. He most likely sourced out to a business that had die cutting and printing equipment to assemble them on his behalf.

In the *Interior Railway Journal* for 1900, 1909 and 1913 we find that he was quite religious. In 1900, he became "the father and treasurer of the gospel service department" of the B & M railroad, something we would not see today in business. In the 1913 *Interior,* he was still going strong as an outdoor service organizer at age 71. Record of his death was found, February 18, 1927.

Although there is nothing definitive in the above about the period when this scale may have been introduced, I feel it is reasonable to assume that Tapley developed it while he was still working or shortly after he retired. This would narrow the time period down to 1900 to 1910.

So it is still unclear. If anyone can provide additional information on the Banjo Letter Scale I would be most appreciative. In any event I am delighted to have had a chance to add this most unusual postal scale to my collection. As always, thanks to Steve Beare for providing the historical background.

Showcase



Two Archery scales are shown here. Pelouze made the 800 grain capacity Archery Grain Scale of plastic and aluminum. It was sold in the 1980s by Martin Archery, Inc. of Walla Walla, Washington and has notches on each side of its plate to accomodate the arrow. Tessier's Archery Supply of Schenectady, New York made and sold this large quadrant scale to show deflection from 100 to 1000 and bow weights from 25 to 92½. It is made of steel with a lead weight. The wooden base measures 29½" long by 4¾" and the scale is 14½" tall.
Jan Berning & Bob Jibben Collections

Draught Spring, not Draught Beer

BY JERRY KATZ

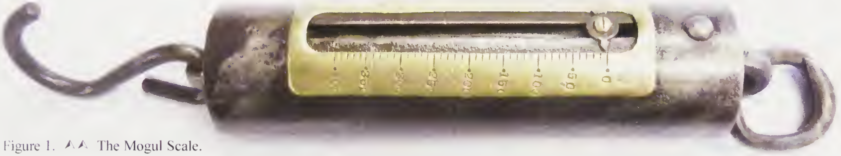


Figure 1. ▲▲ The Mogul Scale.

With the entire scale collecting world drowning in spring balances, why would you want another? As it turns out, I believe I can answer that. The scale of interest is a tubular spring balance, made of cast iron(Figure 1). The tubular wall is ⅛" thick. The tube is 2½" diameter and 9" long. With the usual hook and loop at either end, heavy duty is an understatement. The applied brass dial is graduated to 400 lbs, and is stamped in three different places: a) Mfg by/ R.P. Wilson/Newark, NJ(Figure 2) b) MOGUL and c) Patent Feb 25, 1890 (Figure 3). The patent search reveals that the patentee was a Mr. C. G. Lundborg of NY City (Figure 4).

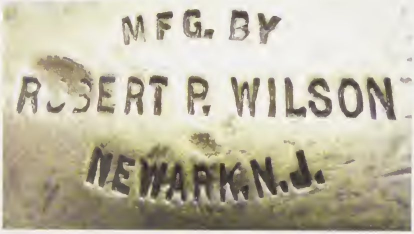
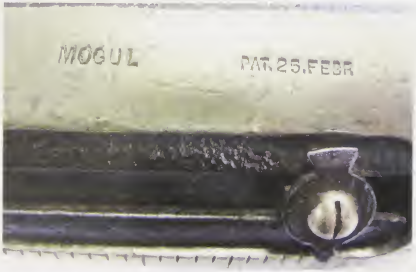
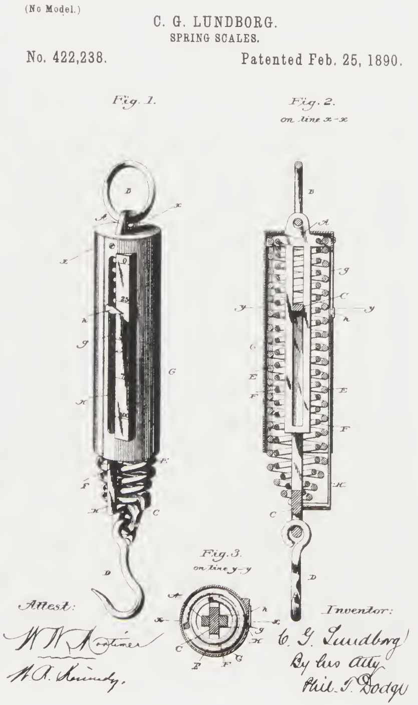


Figure 2. ▲▲ The maker's name is stamped into the brass dial near the bottom to the users' left.

Figure 3. ▼▼ The brass dial is also stamped *MOGUL* and *PAT. 25. FEBR.*





(No Model.)

C. G. LUNDBORG.
SPRING SCALES.

No. 422,238. Patented Feb. 25, 1890.

Attest:
W. W. Mortimer
W. A. Kennedy.

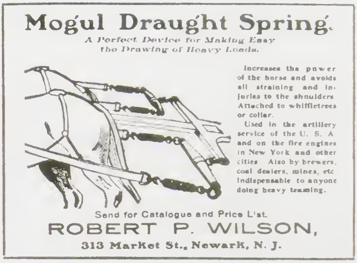
Inventor:
C. G. Lundborg
By his Atty
Phil. T. Dodge

Figure 4. ►► Patent number 422,238 was issued on February 25, 1890 to C. G. Lundborg of New York City, for a spring scale featuring two concentric reversely wound helical springs wound around a linkage to prevent overloading the scale.

Tracking down Mr. Wilson, we find him at 313 Market St, Newark, NJ, making and selling draught equipment for horses. A 1904 advert shows four Mogul scales hooked up to a two horse team, with the declaration,

Increases the power of the horse and avoids all straining and injuries to the shoulders. Attached to wiffletrees or collar. Used in the artillery service of the U. S. Army and on fire engines in NY and other cities. Also by brewers, coal dealers, mines, etc. Indiespensable to anyone doing heavy teaming.

An interesting application of a spring balance - Overcoming inertia! All Mr Lundborg intended to do was improve on a spring balance. Did Mr Wilson conceive of the application??



Mogul Draught Spring.

A Perfect Device for Making Easy the Drawing of Heavy Loads.

Increases the power of the horse and avoids all straining and injuries to the shoulders Attached to whiffletrees or collar.

Used in the artillery service of the U. S. A and on the fire engines in New York and other cities Also by brewers, coal dealers, mines, etc Indispensable to anyone doing heavy teaming.

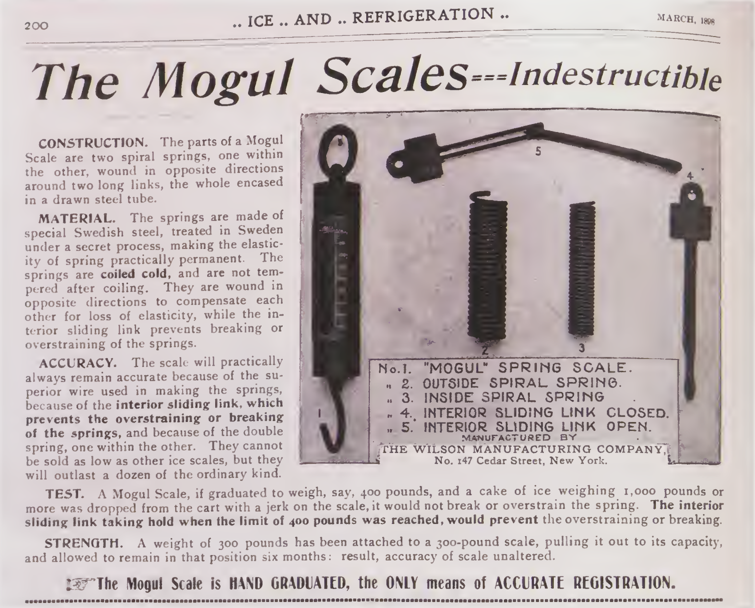
Send for Catalogue and Price L'st.

ROBERT P. WILSON,

313 Market St., Newark, N. J.

Figure 5. Advertisement from *The Black Diamond*, no. 26 of June 25, 1904, showing 4 Mogul scales in use.

Many thanks to Steve Beare for retrieving the archival info for this little story.



200 .. ICE .. AND .. REFRIGERATION .. MARCH, 1898

The Mogul Scales---Indestructible

CONSTRUCTION. The parts of a Mogul Scale are two spiral springs, one within the other, wound in opposite directions around two long links, the whole encased in a drawn steel tube.

MATERIAL. The springs are made of special Swedish steel, treated in Sweden under a secret process, making the elasticity of spring practically permanent. The springs are **coiled cold,** and are not tempered after coiling. They are wound in opposite directions to compensate each other for loss of elasticity, while the interior sliding link prevents breaking or overstraining of the springs.

ACCURACY. The scale will practically always remain accurate because of the superior wire used in making the springs, because of the **interior sliding link, which prevents the overstraining or breaking of the springs,** and because of the double spring, one within the other. They cannot be sold as low as other ice scales, but they will outlast a dozen of the ordinary kind.

No. 1. "MOGUL" SPRING SCALE.
" 2. OUTSIDE SPIRAL SPRING.
" 3. INSIDE SPIRAL SPRING
" 4. INTERIOR SLIDING LINK CLOSED.
" 5. INTERIOR SLIDING LINK OPEN.

MANUFACTURED BY
THE WILSON MANUFACTURING COMPANY,
No. 147 Cedar Street, New York.

TEST. A Mogul Scale, if graduated to weigh, say, 400 pounds, and a cake of ice weighing 1,000 pounds or more was dropped from the cart with a jerk on the scale, it would not break or overstrain the spring. **The interior sliding link taking hold when the limit of 400 pounds was reached, would prevent** the overstraining or breaking.

STRENGTH. A weight of 300 pounds has been attached to a 300-pound scale, pulling it out to its capacity, and allowed to remain in that position six months: result, accuracy of scale unaltered.

☞ **The Mogul Scale is HAND GRADUATED, the ONLY means of ACCURATE REGISTRATION.**

Figure 6. Advertisement from *Ice and Refrigeration* of March 1898, showing parts of a Mogul scale and stating that it could also be used for weighing ice. Compliments University of Illinois Library, Urbana-Champaign, Reference, Research, & Scholarly Services.

Remarks on W.H.F. Kuhlmann Precision Balances

BY UTZ SCHMIDT & LUDWIG WIEPRECHT

ISASC member Allan Rodin recently acquired the depicted analytical scale (Fig. 1) and tried to find out more about its background. His quest finally reached me, Ludwig Wieprecht, member of Mass & Gewicht. Knowing my own rich background history of precision balances in Hamburg, I had the answer.

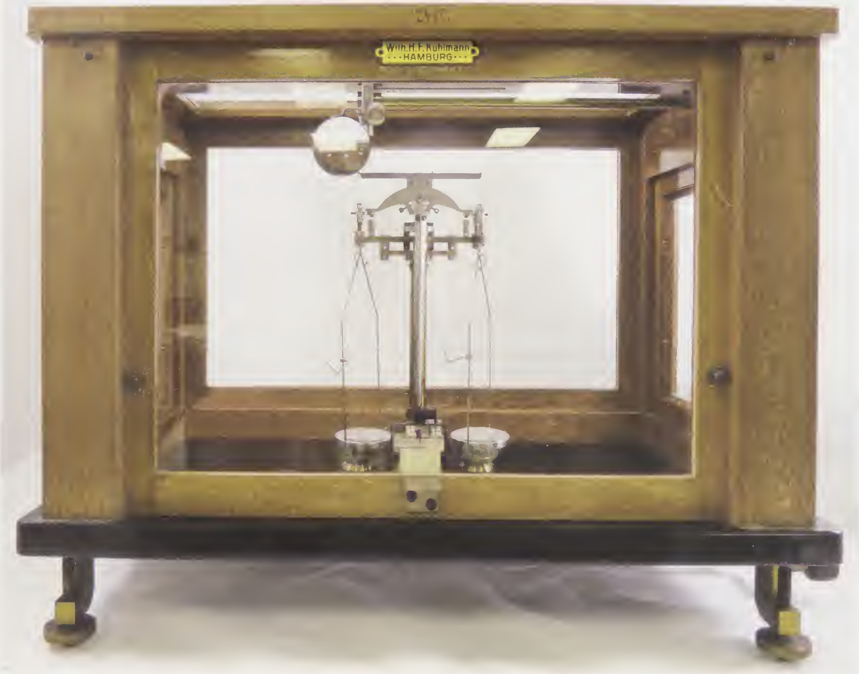


Figure 1. Original Kuhlmann Balance.

W.H.F. Kuhlmann was one of the top-notch precision mechanics of Hamburg's instrument mechanic tradition, which had begun with Johann Georg Repsold (1770-1830). Wilhelm Hinrich Friedrich Kuhlmann's career started in 1892, with an apprenticeship at the renowned shop for analytical balances of Paul Bunge in Hamburg. Just after he finished as a journeyman in precision mechanics in 1886, Paul Bunge, turning blind, sold his company to Theodor Herzberg who had at that point little experience on the manufacturing side. It can be safely assumed that Kuhlmann already ran the shop and continued to do so with the new owner. Very likely in order to secure his talent, Kuhlmann was made partner of the company in 1889, but left soon in 1892 to start his own business. Unfortunately in 1943, this shop with all its documents was destroyed by bombs and not rebuilt after the war ended in 1945.

Comment: The Bunge company continued to exist but ceased production of balances in 1974. It then tried to survive by manufacturing high-precision parts. In 1981 the company was sold, and a few years later shut down.

As a side note, the Bunge factory's last sign was still hanging on the fence around the former manufacturing facility next to the entrance until April 2003 (Fig 2), when co-author Ludwig took down this proof of Hamburg's precision balance history in the middle of the day to "save it." Now it's hanging in his stairwell.

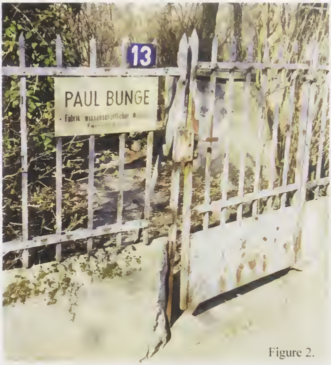
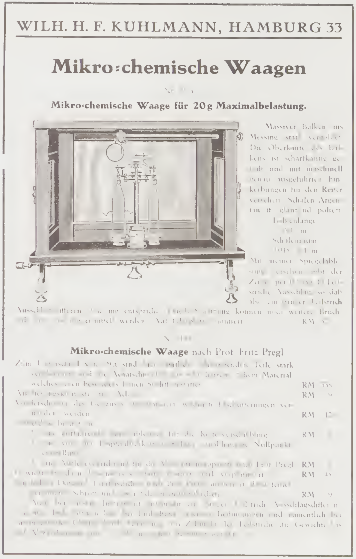


Figure 2.

In the late 1800s and the early 1900s it was quite difficult to use a design feature in order to decide if Paul Bunge, Herzfeld or Kuhlmann manufactured the balance because Paul Bunge never patented his designs, with the exception of the substitution balance. So Kuhlmann initially continued with the known constructions in his own shop and proved to be a worthy scholar of Paul Bunge with an equivalent, outstanding quality and execution, but he continuously strived to improve them. Later on, the Kuhlmann designs started to differ from the Bunge precision balance with Herzberg's modifications; he made distinct changes for additional features, as an example the readout, to mention just one.

During their time, the Kuhlmann balances were the industry leaders, reason enough for Professor Fritz Pregl to work in the 1920s solely with Kuhlmann balances in Innsbruck and later on in Graz, Austria. In 1923, he was honored with the Nobel Prize for Chemistry. Shortly afterwards, W.H.F. Kuhlman got for his achievements the title of a Dr. Ing. h. c. from the "Technische Hochschule" in Munich. The vast history of Kuhlmann and all the other shops, which had their origin in Bunge (e.g., Kaiser & Sievers, Bekel), can be found in various publications of Hans R. Jenemann[1-3].

Back to the Kuhlmann balance, Allan's scale can be found in a 1933 catalog of the company with the description: *Mikrochemische Waage Nr. 19a für 20 g Maximalbelastung (Figure 3)*, translated *Micro chemical balance No. 19 for a maximum load of 20 g.* [less than ¾ oz.!] The balance No. 19a is the base model of the No. 19-series, available with different features for readout and rider carrier. I am not aware of a list with the chronology of the serial numbers; so I am not able to define the exact date of origin for this scale. I estimate the date between 1925 and 1935. In case the balance is complete and fully functional, it is without a doubt a precious piece of art in building balances in Hamburg, Germany.



WILH. H. F. KUHLMANN, HAMBURG 33

Mikro-chemische Waagen

Mikro-chemische Waage für 20g Maximalbelastung.

Mikro-chemische Waage nach Prof. Fritz Pregl

Figure 3.

Aside from the short history on Kuhlmann, we would like at this point to pass on a warning: Reproductions of Kuhlmann balances appeared in Germany and The Netherlands! They originated most likely from India. Be careful! *Meten en Wegen*[4] reported on the subject and in addition, we got pictures of a reproduction balance, which a friend bought in Hamburg as decoration for his apothecary (Fig. 4).

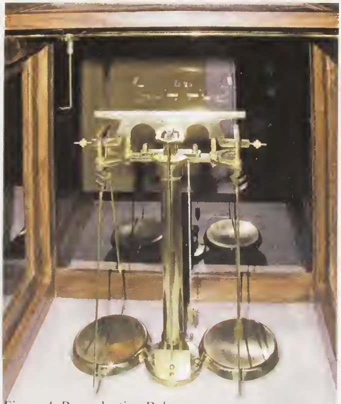


Figure 4. Reproduction Balance.

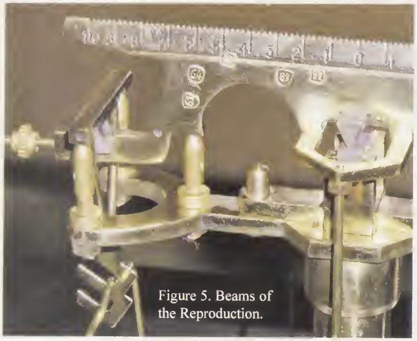


Figure 5. Beams of the Reproduction.

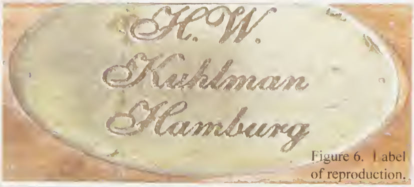


Figure 6. Label of reproduction.

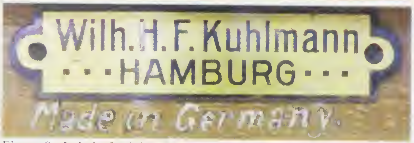
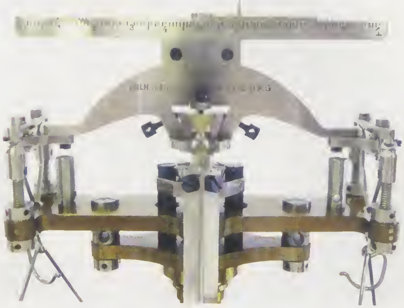


Figure 8. Label of original Kuhlmann Balance.

Two features are an immediate giveaway for the reproduction. Number one is the beam with calibration marks. This type of scales is not used for public trade and in addition a sealer would have never dared to stamp the beam, because the resulting inaccuracy would have destined the balance for the scrap pile (Fig. 5).

Secondly the manufacture's plate is sloppily made with an incorrect name (Fig. 6). Altogether there is no doubt that Allan's balance is a beautiful original. Congratulations! Allan guard it.

Figure 7. Beams of the original.



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5. Photos of Fig 1, 7 & 8: Jan Berning

6. Photos of Fig. 4 to 6: W. Thimann

Is it a Scale???

BY BILL BERNING

One of my wife Jan's specialty scale collections is her collection of combination letter openers and letter scales. These combination tools have been made by many makers for over a century. There are many different designs and they have been made of many different materials. She seems to have most of them in her collection.

In about 1995, we were in an antique shop in Pennsylvania. While looking through a cigar box full of letter openers, she pulled out a sleek green translucent letter opener (Figure 1) and asked me if it was a letter scale. My immediate answer was it could be used as a simple rocker. Was it made this way by chance or design? At 25 cents, she decided to buy it and answer the question later.

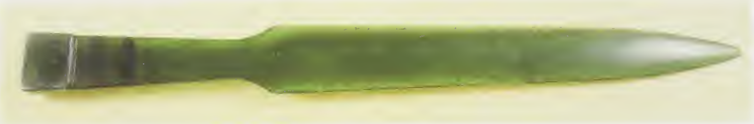


Figure 1.

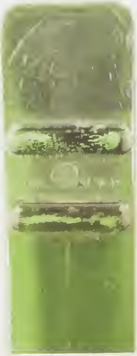


Figure 2.

Once home I experimented with it and determined it was a letter scale. This scale could only be used to check letters for three weights: one ounce or less, two ounces, or over two ounces.

This plastic letter opener / letter scale is nine inches long. There is no name on it or any other indication of who made it or when it was made. Our only guess was that it was made after the war. The only hints to its identity are the letters *PAT. APLD.* (Figure 2) molded into the bottom side of the handle.

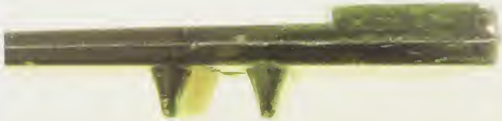


Figure 3

To use this opener as a scale, you would set it flat on a desk top. It has two pivot points on the bottom and a squarish platform at the end of the handle for the letter (Figure 3). One ounce or less will not tip the scale, two ounces will tip the scale to a horizontal position resting on both pivot points, and more than two ounces will tip the scale all the way back.

For the next fifteen years, we did occasional research on this scale and found nothing. While looking at a lot of letter openers on eBay I spotted the distinct shape of a familiar letter scale. This one was red plastic (Figure 4) and had an oval sticker on it. I was

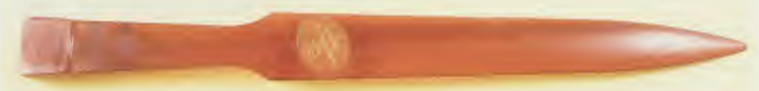


Figure 4.

the high bidder on this lot and it arrived in the mail a few days later. The new red scale was identical to the green scale, but the well-worn sticker provided a new clue to the origin of this scale. The sticker (Figure 5) read GADGET-OF-THE-MONTH CLUB INC.

The Gadget of the Month Club was a business started in November of 1946. A one-year membership was $5.00. Every month you would receive a new gadget in the mail. It might be a spoon rest, combination nut cracker/ice tongs, spring action fly swatter or a combination letter scale/letter opener. Half and quarter page ads were placed in *Popular Science* and *Popular Mechanics* magazines to recruit new members in the late 1940s and the early 1950s.

So far, the only way to date this scale is from an article in the March 1948, issue of *Popular Science* magazine. This scale is pictured and described in an article (Figure 6) about the Gadget of the Month Club.

As with many cheap letter scales; this one is more of a gimmick than an accurate scale. If the letter is not centered on the platform, that will affect the accuracy.

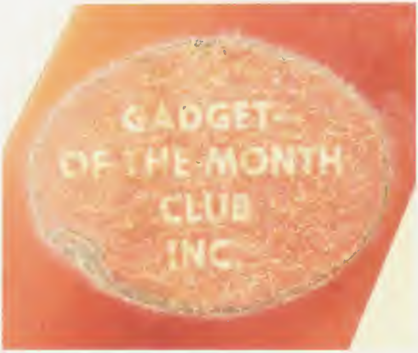
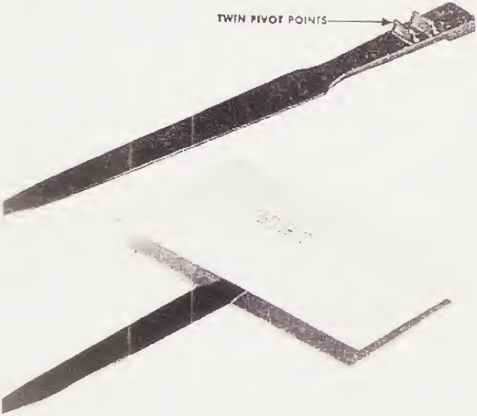


Figure 5.

In 1948, there were over 400,000 members of the Gadget of the Month Club in all 48 states. Presumably many of them received one of these plastic letter opener scales (Figure 7). You should be able to find one.



This letter opener also weighs mail. Balancing on twin pivots, it stays tilted down if letter is ounce or less, raises to horizontal if between one and two, tilts up if more than two.

Figure 6. The article in *Popular Science Weekly* for March 1948 reads in part: *More than 400,000 Americans are shelling out from one to five dollars apiece to dip their hands into a monthly, mail-order grab bag. What will come out each month no one knows until the wrapping is off. All they know is that it will be some gadget representing the latest mechanical effort to make life a little easier, safer or more fun.*

What they get depends on whether they have sent in one dollar for a six-month trial or five dollars for a year's subscription to a dozen bigger and better gadgets.

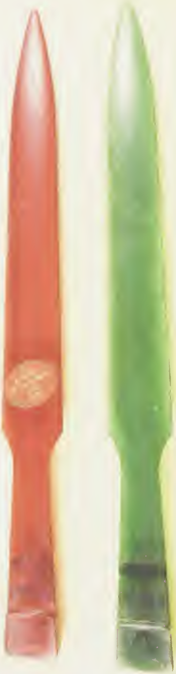
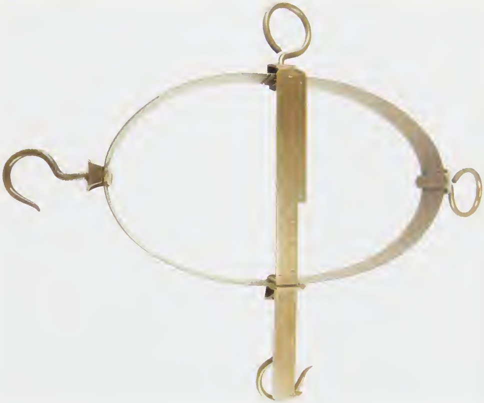


Figure 7.

SHOWCASE

Oscar C. Squyer of West Dresden, New York was issued patent number 28212 on May 8, 1860 for this interesting two-way flexure spring scale. Manufactured of sheet, forged and cast steel, it measures 8½ by 6½ inches and has a 5 or 10 pound capacity.

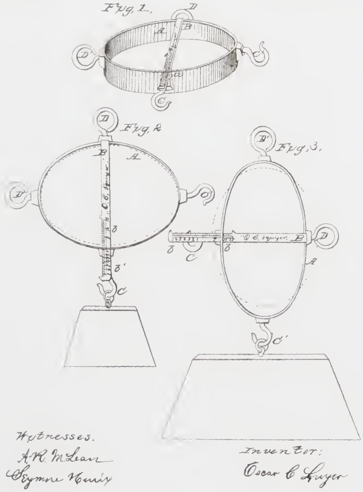
Squyer was born 31 May 1834 in New York. According to the 1860 US Census, Squyer was married to Mary, living in Torrey, Yates County, NY with a West Dresden, NY postal address and was employed as an engineer.



O. C. SQUYER.

Spring Scale.

No. 28,212. Patented May 8, 1860.



Civil War records show that he enlisted as a 1st Sergeant on 26 July 1862 at the age of 26 and joined Company B of the 126th Infantry Regiment New York on 22 Aug 1862. On 1 March 1864, he was Promoted to Full 2nd Lieutenant and was discharged from Company B, 126th Infantry Regiment New York on 25 Dec 1864.

After the War, records show that Squyer moved to Penn Yan, Yates County, NY and that by 1874 he was living in Minneapolis, Hennepin County, Minnesota.

The 1900 US Census shows him as a widower, living in a rooming house in Minneapolis, Minnesota where he was employed as a Real Estate Agent. He died in that city in 1902 and is buried in the Lakewood Cemetery there.

Other patents issued to Squyer are number 74,728 of 18 February 1868, for a pencil sharpener improvement and number 152,238 of 27 October 1874, for a door bolt improvement.

More information on Squyer's scale patent see pages 1904-1906 in EQM.

Phil Wehman Collection.

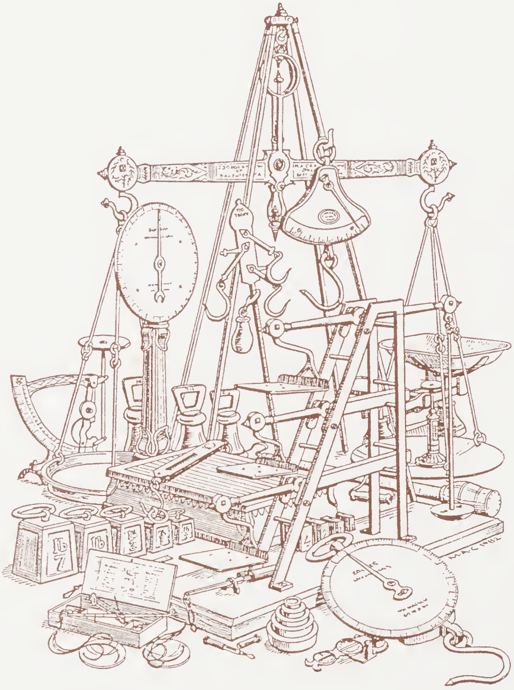
ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

MAY 17 - 21, 2012

CONVENTION PROGRAM

PITTSBURGH, PA



ISASC CONVENTION SITES

1979	San Francisco, CA
1980	London, England
1980	New York City, NY
1981	Delft, The Netherlands
1983	Sindelfingen, West Germany
1984	Chicago, IL
1986	Washington, DC
1986	Paris, France
1987	Anaheim, CA
1988	Boston, MA
1989	San Francisco, CA
1990	Philadelphia, PA
1991	Chicago, IL
1992	San Diego, CA
1993	Baltimore, MD
1994	San Francisco, CA
1995	Hershey, PA
1996	New Orleans, LA
1997	Los Angeles, CA
1998	Toronto, Canada
1999	Atlanta, GA
2000	Seattle, WA
2001	Chicago, IL
2002	Pittsburgh, PA
2003	San Antonio, TX
2004	Minneapolis, MN
2005	Washington, DC
2006	San Francisco, CA
2007	Dearborn, MI
2008	Chattanooga, TN
2009	Kansas City, MO
2010	Portland, OR
2011	Denver, CO

Welcome
to the
Thirty-Fourth Convention
# of the
International Society
of
Antique Scale Collectors

May 17-21, 2012
Sheraton Station Square Hotel
Pittsburgh, Pennsylvania

IS

INTERNATIONAL SOCIETY O

PRO

THURSDAY, MAY 17, 2012

6:30 P.M. - 10:00 P.M.
"DUCHESS" RIVERBOAT DINNER CRUISE
Meet in lobby to walk next door to board starting at 6:00 P.M.

FRIDAY, MAY 18, 2012

9:00 A.M. - 5:00 P.M.
TOUR OF ISASC COLLECTION & FIRTH COLLECTION
Busses start loading at main entrance at 8:30 A.M.
Lunch at Leslie N. Firth Learning Center

5:30 P.M. - 10:00 P.M.
COLLECTOR'S GET-TOGETHER • OFFICIAL WELCOME
ALBUM-SHARING • DISCUSSION OF WEIGHTY MATTERS
Light Meal • Haselton Room 2nd Floor

SATURDAY, MAY 19, 2012

8:30 A.M. - 12:00 NOON • *Haselton Room 2nd Floor*

"PENNSYLVANIA SCALES: CORRIDOR TO THE WEST"
Kurt Beyreis

"GRAIN TEST-WEIGHT SCALES YESTERDAY AND TODAY"
Leslie N. Firth, Bob Jibben and John Burkett

"WHAT ABOUT THE VICTORIANS?"
Janet Scarratt

"SCALE INDUSTRY SUPPORTED VICTORY"
Greg Moss and Utz Schmidt

RAM

12:15 P.M. - 1:30 P.M.
LUNCHEON BUFFET
Brighton Room 2nd Floor

2:00 P.M. - 5:00 P.M.
SILENT AUCTION & LET'S MAKE A DEAL
Coordinated by Eric and Judy Soslau
Grand Station Room III-V 1st Floor

6:00 P.M. - 10:00 P.M.
GALA RECEPTION AND BANQUET
Ellwood Room and Brighton Room 2nd Floor

SUNDAY, MAY 20, 2012

8:30 A.M. - 11:30 A.M. • *Haselton Room 2nd Floor*

SHOW AND TELL
Special treasures from our members • Moderator Jerome Katz

BUSINESS MEETING
Officer reports, floor discussions and comments

11:45 A.M. - 1:15 P.M.
LUNCHEON BUFFET
Reflections Room 1st Floor

2:00 P.M. - 4:00 P.M.
DUCK BOAT TOUR
Mary Ann Murphy's Collections

MONDAY, MAY 21, 2012

8:00 A.M. - 4:00 P.M.
TOUR TO BEAUTIFUL BEDFORD COUNTY, PENNSYLVANIA
Bus departs main entrance at 8:00 A.M.
Visit Larry Press' Collections
Lunch at Bedford Springs Resort & Spa
Return to Hotel

SEE YOU NEXT YEAR IN RIVERSIDE, CALIFORNIA!

IN ATTENDANCE*

Joyce Anthony, Woodside, California
Steve & Kathy Barnett, Ellicott City, Maryland
Steven & Karen Beare, Wilmington, Delaware
Jan & William Berning, Sycamore, Illinois
Kurt & Ann Beyreis, Maurertown, Virginia
John & Betty Cheeseman, Dorset, England
Norman & Phyllis Cima, Menlo Park, California
Jim Dietrich & Joyce Glazier, St Charles & Saginaw, Michigan
James & Kathie Earle, Lullymore, Ireland
Mary Easton, Downers Grove, Illinois
Leslie & Elaine Firth, Mercer, Pennsylvania
Michael Foster & Margaret Granville, Manotick, Ontario, Canada
Bob Foster, Dayton, Nevada
Carolyn & Joe Ghilarducci, Tacoma, Washington
Carol & Bob Hayden, Austin, Texas
Gregory & Judy Hill, Mira Loma, California
Arline & Bill Jacobson & *Linda Bernstein*, Bayside, New York
William & Nancy James, Orinda, Califonia
Robert Jibben, Minneapolis, Minnesota
Jerome & Mary Katz, Downingtown, Pennsylvania
Ross & Winsome Leadbetter, Chapel Hill, North Carolina
Don Low, Mercer Island, Washington
Clifford & DeVee Lushbough, Aurora, Colorado
Jerry & Angeline Mirman, Copley, Ohio
Clem & Katharine Monday, Oroville, California
Greg & Beverly Moss, Waterford, Michigan
Mary Anne Murphy, Pittsburgh, Pennsylvania
Bryan & *Barbara Negrini*, Pittsburgh, Pennsylvania

** Names of members attending their first convention are in italics*

IN ATTENDANCE*

Catherine Panagakos, Greenville, South Carolina
Lawrence Press, Jacksonville, Florida
James Reeve, Springfield, Missouri
Allan & Aviva Rodin, Northfield, Illinois
Janet Scarratt, Desford, England
Utz & Shirley Schmidt, Palms, Michigan
Don & Donna Schoenly, Glen Ellyn, Illinois
Don Shaw & Donna Meeks, Cedar Rapids, Iowa
Shirley Silva, Danville, California
Barry & Irene Silverstein, Raleigh, North Carolina
Ben & Mary Smith, Jackson, Michigan
Eric & Judy Soslau, Austin, Texas
Lorraine Texeira & Mary Krause, Pleasanton & San Ramon, California
James, Barbara, & Russell Tope, Mount Sterling, Ohio
Jaap & Ronnie Visser, Haarlem, The Netherlands
Florence Vogel & *Herbert Press*, Potomac & Columbia, Maryland
Phil & *Melissa Wehman*, Chattanooga, Tennessee
Jack Young, Beaumont, California

CONVENTION NOTES

1. Bidder numbers for the Silent Auction are on the back of the name tag. Please wear your name tag to all events.
2. Be sure to bring your MEAL TICKET to each applicable meal.
3. Attire: Casual for days and evenings. Dress-up suggested for Saturday night banquet.

CONVENTION COMMITTEE

Leslie N. & Elaine Firth
Mary Anne Murphy, Kurt & Ann Beyreis, Bryan Negrini, Larry Press,
Jan Berning, Carol Hayden, Bill James,
Don Schoenly, Eric & Judy Soslau & Ben Smith

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

Founded September, 1976

OFFICERS 2012

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Vice Presidents.............................Bill James
Jerome Katz
Clifford Lushbough
Mary Anne Murphy
Shirley Schmidt
Secretary.......................................Carol Hayden
Treasurer.......................................Kurt Beyreis

Executive Secretary.... ....Jan Macho

Number 130 May 2012

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

A Balanced View

Pittsburgh The Second Time Around

We know it sounds like another old cliché, but once again we hit the ball out of the park at the Pittsburgh Convention held May 17th through May 21st. Congratulations to Les Firth for chairing an outstanding event. The committee of Kurt and Ann Beyreis, Mary Anne Murphy, Brian Negrini and Larry Press should be commended for their work. It was another great turn out of members with lots of discussion, interesting presentations and show and tell.

The seventy-eight of us who were fortunate enough to be there enjoyed a weekend full of scale viewing, good fun and plenty of time to spend with other scalies. The highlight of the weekend was the opportunity to see four significant scale collections. Friday morning started off with a visit to our own ISASC Collection. It has been ten years since we received the initial grant from member Bill Everett to embark on this mission to put together a collection with the ultimate goal of public display. The general reaction upon seeing the collection in its new display facility was a collective "WOW!". All the volunteers who worked on getting it to this point deserve an abundant amount of kudos for their work. Many who had questioned this project have now seen the possibilities. It's definitely worth the trip to Pittsburgh to see the collection donated by our members.

The attendees were also able to see the Les Firth, Mary Anne Murphy and Larry Press Collections. Their collections show a vast cross-section of some of the finest scales and weights known. In terms of the number of scales to see the Pittsburgh convention vies with a few others to be right near the top.

There was a terrific camaraderie throughout the weekend as we welcomed back members who had not been able to attend in the last few years, as well as a few first-timers. At the Saturday evening banquet Bill James recognized Convention Chairman Les Firth and thanked the entire committee for the outstanding work they did to ensure a memorable weekend for all of us. The Silent Auction was very successful with many walking away with new treasures. We parted with the commitment to meet again next year. To see more about the convention be sure to visit www.isasc.org under Events/Annual Convention.

Down by the Riverside

We are very pleased to announce that our 2013 convention will be held in the city of Riverside, California. The convention hosts, Greg and Judy Hill, addressed the attendees at the Pittsburgh Convention and gave them an overview of what is in store for those making their way to Riverside next May. Nestled in the old town district, our hotel is a magnificent architectural treasure with a fascinating history. Greg and Judy intend to do their best to show off the area and provide the opportunity to see at least three major collections. Mark the dates of May 16 through May 20 on your next year's calendar, so you won't miss another enjoyable occasion to meet with your fellow scalies.

2014 and Beyond

Convention Oversight Chairman Bill James is looking for hosts and ideas for locations for conventions in 2014 and beyond. If you are interested in hosting a convention in your city or have a great idea of where an ISASC convention should be held, please let him know at billjamesca@yahoo.com or by phone at 925-254-6630. He wants to remind folks who are thinking about it, but feel a bit overwhelmed by the notion. that convention hosts are given a great deal of help and support throughout the planning and execution stages making the job much easier than it sounds. Most past hosts will testify that they enjoyed the opportunity to welcome fellow scalies to their neck of the woods, that the process gave them a great sense of satisfaction and brought them closer to others in the society.

Peter Laycock

It is with the upmost regret that we let you know that our past president Peter Laycock lost his battle with cancer on May 15, 2012. Those of you who have attended conventions and regional meetings knew Peter as an enthusiastic scale collector who strongly supported our society and greatly contributed to its success. Peter leaves behind many scalie friends who will miss his easy-going affable way, his positive outlook and the joy he took in sharing his hobby with others. Greg Laycock sent us the following, “Thank you all for your continued support over the last 18 months, it made our family’s difficult journey a little easier and Peter truly appreciated it.” We offer our deepest sympathy to his wife Dian, sons Greg and Geoff and daughter Pam.

Regional Meetings Coming Up

The fall line-up of the annual regional meetings kicks off with the Midwest Weigh-In on September 15 at the home of Harry and Jane Hawley in Marion, Iowa. Harry and Jane have come up with a novel way to host a regional. They are taking everyone on a field trip! The plan is to visit the nearby farm of the newest Iowa members Roger and Mary Geater.

On September 29 Jerry and Mary Katz are again hosting the Mid-Atlantic Scale Summit at their home in Downingtown, Pennsylvania. Just as last year, this regional meeting is scheduled in conjunction with the Renninger’s Kutztown Antiques Extravaganza weekend. Members who attended last year highly recommend this opportunity to get in some great antiquing while visiting with other scalies.

The 15th annual Michigan Get-Together will be held on October 6 and hosted by Utz and Shirley Schmidt at their home in Palms, Michigan. The Michigan crowd always has a super fun time and Utz and Shirley’s home set on the shores of Lake Huron is a perfect setting in early autumn. Potluck is the special of the day and this crowd usually does a show and tell with a bit of scale trading on the side.

Regional meetings are a great way to get together with other ISASC members, especially if you aren't able to attend the annual conventions. They are one day affairs held on the weekend to make it as convenient as possible for people to attend. There is nothing cliquish about any of these gatherings as they welcome members from all over. So make plans to show up at the one or two of your choice, or all three, if you like. Just be prepared to have a great day meeting folks, learning about scales and maybe even picking up a new treasure for your collection.

Our Resident Coin-Operated Scale Expert

Most of us know Bill Berning as an laid-back guy who happens to be passionate about coin-operated scales. So passionate that he decided about seventeen years ago to go into the full-time business of repairing, restoring and selling scales and parts in addition to operating scales as a vending route. Bill has about 900 coin-operated scales in his personal collection. His love and specialty is Watling scales, but he collects and works on all types. With his specialized knowledge Bill has agreed to serve as the point person for coin-operated scales for our Special Interest Point of Contact Program. If you have any questions concerning these scales or would just like to talk with another collector who shares the same interest feel free to contact him.

Recently Bill was interviewed by Harry Rinker on his nationally syndicated antiques and collectibles call-in radio show *Watcha Got*. In addition to talking about his interest in coin-operated scales, Bill broadened the discussion to include all types of scales. We owe him big time, because he managed to get a plug in for ISASC and the convention. Our members are our best recruitment tool!

Meet Our Members

New member **Bob Ustrich** sent us this note: My wife Roberta (yes, Bob and Bobbi) and I live in the Los Angeles suburb of Westchester. I am a retired dentist whose interests include fly-fishing (the Eastern Sierras are a five hour drive away), gardening (I raise orchids, bromeliads and platyceria in my coastal backyard) and cooking. Bobbi retired as an auditor for the County of Los Angeles and is happiest when helping out with our two young grandboys.

Some twenty plus years ago, my father-in-law offered me an old, very rusty double pan balance scale that he had found in an apartment storage locker. I cleaned it up and placed it on our mantle. Some months later, while wandering through an antique shop, I saw and purchased another. I now have seventeen scales and a few sets of weights. I try and purchase scales that have some particular characteristic that appeals to me. I have not sold or traded, but just enjoy the uniqueness of my individual items.

I very much appreciate the welcome that I have received from this organization and look forward to meeting others with a similar hobby.

Wayne Daniel is another new member and forwarded the following: In 1992, I moved from Denver, Colorado to the United Kingdom. Specifically, I lived in the town of Harrogate, in the County of North Yorkshire. I lived in England for thirteen years, and over the years developed an interest in antique weights and measures. One of the benefits of living in England is that there are many antique stores and antique fairs where it's possible to find that rare scale, weight and/or measure.

I was mentored by ISASC member John Lound. He was an active collector, and as a measurements engineer had a wealth of knowledge regarding weights and measures. He had amassed an incredible collection, and educated me in the 'finer' points of collecting. Like John, I too am an engineer, and I suspect my interest in weights and measures is a result of the years I spent in engineering school weighing and measuring a variety of 'things.'

I've collected many fine antique scales, measures and weights. I'm particularly fond of the DeGrave Short Postal Ladder Scale that I possess. The scale is in excellent condition and includes the original weight set. I also have several Mordan Postal Scales, all in excellent condition. I have a complete County of London (1892) Imperial Measurement set, several complete sets of Bell Weights, Cup Weights, and an old 'commonwealth' Bell Weight dated 1627.

My wife and I moved back to the United States in 2005, and currently live in San Antonio, Texas. I joined the ISASC earlier this year hoping to network with other collectors who, like me, have an interest in old antique weights and measures.

Bravo, Jan!

By now you should have received your Membership Directory for 2012. Our editor, Jan Berning, has taken over the responsible of updating the directory. In doing so, she has made a gargantuan effort to update all the data and get everyone's address into the current post office standard, because our address labels also come from this listing. She has spent many hours completing this task doing her best to make sure all is correct. However, we recognize that when dealing with so much data, mistakes can happen. Please review your listing, and let us know if there should be any corrections. If you find a mistake in the directory, please also check the enclosed correction listing as we may have already corrected your information. We ask that through the year, as any of your contact information changes, to email or phone Membership Chair Shirley Schmidt.

In Memoriam

We are deeply saddened to let you know of the passing of two longtime members, Dale Reed and Dean Terwilliger. We offer our deep condolences to their wives and family.

Dale was a very early member and a strong supporter of ISASC. He served as an advisor to the Collection Development Committee sharing his considerable expertise in the scale business and community service. Along with his wife Donna he regularly attended conventions.

Dean had been a member since the mid-eighties. Over the years he and his wife Janet were dedicated convention goers. He enjoyed collecting varied types of scales.

Welcome New Members

We want to take this opportunity to welcome our newest members:

William Harding	Barkhamsted, CT
Joyce Anthony	Woodside, CA
Tom Kustowski	Avoca, MI

I recently saw an interesting comment from a seller on eBay trying to encourage people to purchase some scales and weights he was selling. His thought was how many of these newfangled electronic scales will still be working 100 years from now so get something that works forever. Something to consider.

Finally, another thanks to Les and Elaine and all the people who made the convention so successful including all the attendees. Enjoy your summer. Remember, the convention is only eleven months away and so it is not too early to start thinking about joining us in Riverside. UNTIL NEXT TIME

ISASC

EQUILIBRIUM®

QUARTERLY MAGAZINE OF THE INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

2012 ISSUE NO. 3

PAGES 3825 - 3852

Cover Picture

This lovely Belgian pendulum postal scale is marked at the top of its simi-circular dial, J. Heuchen, Liege. It has a capacity of 100 grams and is graduated from 0 to 50 grams by 1 gram and from 50 to 100 grams by 5 grams. The graceful curved dial, pendulum and letter plate are made of brass. The pointer is made of steel and the cast iron base is reminiscent of a grand piano. The scale measures 10½" tall and the gracefull curves make it an interesting addition to any scale collection.

Bob & Carol Hayden Collection

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ISASC
INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

EQUILIBRIUM is published quarterly in February, May, August and November.

© 2012 International Society of Antique Scale Collectors

ISSN: 0893-2883

International Society of Antique Scale Collectors
Founded September 1976
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www.isasc.org

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. . . . .Shirley Schmidt
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Executive Secretary . . . . Jan Macho

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Published with the co-operation and support of
ISASC Europe
Founded October 1993

Charity Commissioners for England & Wales No 1037558
www.isasce.com

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Photos are best in 300 DPI Jpegs in a separate file with a maximum of 3 photos per Email.

Scale Industry Supported Victory

BY UTZ SCHMIDT & GREGG MOSS

This article is all about *How to Win Wars* from the Civil War to WWII and see the role scales, balances and their manufacturers played. The goal is Victory! In order to bring the different times to life, a great number of pictures, posters and news clips are used. The idea for the research was born several years back after acquiring a WWI ad from the Detroit Automatic Scale Company and then recently winning on eBay the battle to get a "Background for Victory" catalog from Toledo Scales. The quest was on to find information to confirm once more that *Nothing Goes Without Scales*. Thanks to a battalion of helpers in the US and Europe, you can read here the result of the joint effort. Our sincere thanks go to Brooke Paige, Charley Amsbaugh, Diana Crawforth–Hitchins, Jan Berning, Klaus Schröter, Kurt Beyreis, Peter Laycock, Rudolf Wantoch and Steve Beare for research support, helpful information and pictures.

Roles of Scale Industry

- Weighing of War and Commercial Goods
- Specialty Scales
- Production of Armaments
- Food Supply & Rationing

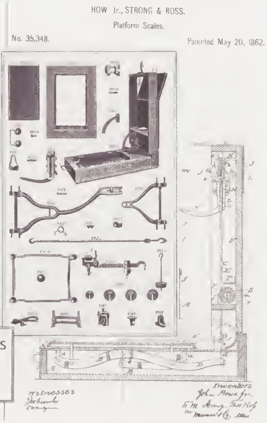
+ Materials Priorities

After some debates the co-authors decided on four research criteria for the roles which the scale industry and their personnel played in war times and then saw the need to add a fifth for WWII, materials priorities, even though material shortage certainly existed during the prior wars.

Our story begins with John Howe's patent for **portable** platform-scales in May 1862, shortly after the start of the Civil War. The patent text mentions: *...improvement in platform-scales, whereby the same are rendered portable and convenient for army... The object of this invention is to obtain a platform-scale which will be capable of being folded so as to form a very compact article when not required for use,...* An 1864 Howe ad captures the enthusiasm of the company, showing soldiers marching through the building complex of the Howe Scale Company in the town. Immediately, this scale also became very popular with the Navy to weigh recruits, food and war materials. To support the rapidly increasing need, even Fairbanks and others were

Portable
Platform Scale
Howe Patent
1862

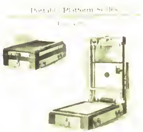
... we, John Howe, Jr. ...
... all of Brandon
... Improvement in Platform scales ...
... rendered portable...
... for ***army*** and other uses:

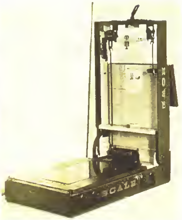


List of Extra Parts
For
Army Scales

Weighing Recruits & Supplies

Fairbanks Cat 1922



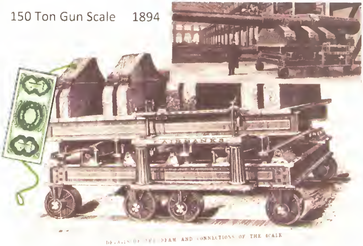


Howe Photos
May 22, 1885

recruited to make it. It still remained in use during WWII times, almost unchanged.

Again in May, though 32 years later, a second Vermont-based scale maker in 1894 made the headlines. This time it was Fairbanks with THE HUNDRED AND FIFTY TON **PORTABLE** GUN SCALES OF THE WATERVLIET ARSENAL. The text in Scientific American reads: *It is a trite saying that all modern science is built upon the balances. Modern chemistry developed its possibility of growth only when chemical balances began to be used in the laboratory. Believe it or not, this was a giant "Assay Scale" with a capacity of 300,000 pounds.* It continues: *The charges of flux and ore for the blast-furnace and of steel for the crucible are now accurately weighed and precise results in metallurgy are obtained by the aid of scales. ... which is probably the largest of its class in the world*[1]. *Amazing is the accuracy. A paper dollar bill disturbs the equilibrium and an officer, climbing on a canon, can be weighed within a pound of his known weight.*

150 Ton Gun Scale 1894


FAIRBANKS
DETAILS OF THE BEAM AND CONNECTIONS OF THE SCALE

$1 Bill Disturbs Equilibrium

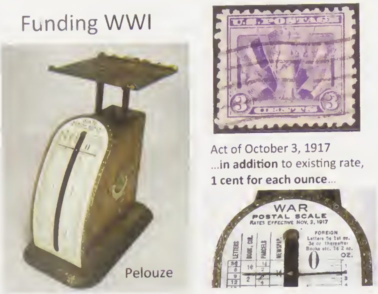
World War I

Tank Attack: Second Battle of the Marne

Let's step into World War I times. The picture of the Second Battle of the Marne in 1918 indicates war expenses increased for tanks, battle ships, and the endless number of armaments. The country got engaged.

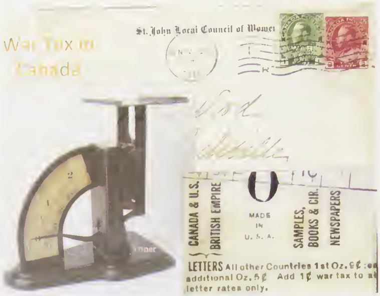
Then the wake-up call came with the question of how to pay for the war. But there was an immediate solution: increasing the postal rates in support of the war efforts. On November 2, 1917, the cost for a letter jumped in the USA from 2 to 3 cents. After the Treaty of Versailles, the three-cent *Victory Stamp* was issued, from March 3 to July 1, 1919, in commemoration of the successful conclusion of the war. Please

Funding WWI

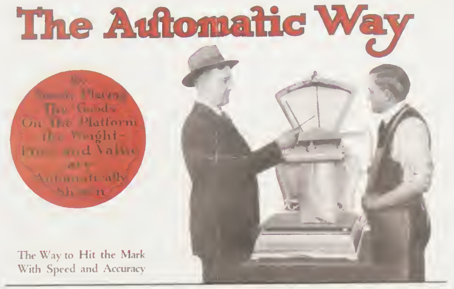


Act of October 3, 1917
...in **addition** to existing rate,
1 cent for each ounce...

War Tax in Canada


St. John Local Council of Women
CANADA & U.S.
BRITISH EMPIRE
MADE IN U.S.A.
SAMPLES, BOOKS & CIR.
NEWSPAPERS
LETTERS All other Countries 1st Oz.
additional Oz. Add 1¢ war tax to
letter rates only.

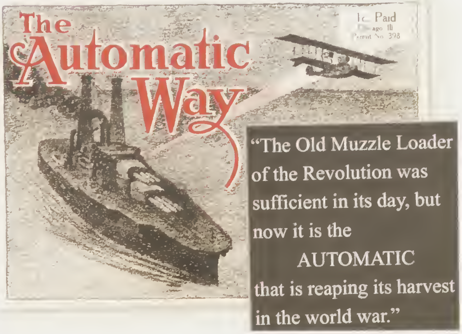
note the scale in the left hand of Justice. The postal rate hike required new postal scales as shown in "Funding WWI." Interesting enough, our ally, Canada, created a one-cent War Tax stamp. Their scale and stamp are shown in "War Tax in Canada."


The Automatic Way
By Simply Placing The Goods On The Platform the Weight-Price and Value are Automatically Shown

The Way to Hit the Mark
With Speed and Accuracy

Detroit Automatic Scale Company, Detroit, Michigan

After having the finances in order, we come to the big surprise and puzzling question: Why is the ad from the Detroit Automatic Scale Co. showing, in addition to a slew of scales, a battle ship shooting at a plane and talking in the text of reaping the harvest in the world war? In order to know the rest of the story, let's meet the head of the company, Samuel Hastings, because he is the answer. In 1899, he was one of the organizers of the Moneyweight Scale Co. in Chicago, Illinois, and was made its vice president, secretary and treasurer and remained so for many years. He moved up fast in the ranks, as *American Industries*[2] reports in August 1917. He was also president of The Computing Scale Company of Dayton, Ohio, president and treasurer of the Computing Scale Company of America, and a director and executive officer of the Computing Scale Company of Canada, Ltd., and the Detroit Automatic Scale Company. In addition, he was also director of the Computing-Tabulating-Recording (C-T-R) Company of New York. Starting in 1915, he held as well the position of president of the Illinois Manufacturers' Association, pledging in



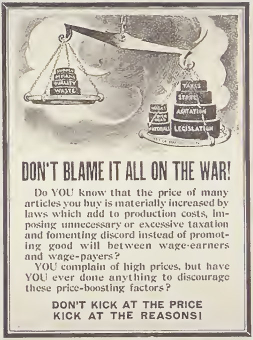
"The Old Muzzle Loader of the Revolution was sufficient in its day, but now it is the AUTOMATIC that is reaping its harvest in the world war."

1916 *themselves and their plants to the service of the nation. Billions of dollars worth of manufacturing plants were voluntarily rendered to the government to produce martial equipment for the army and navy, foodstuffs and everything necessary to make a rapid movement of the nation's forces possible.* In addition, Hastings was an enthusiastic, quite active supporter of the cause and even became a consultant to President Wilson. Now we know the reason for the ad.

But there is more, as we learn from Robert Sobel. From 1914 to 1917, sales of C-T-R's computing scales *doubled to $8.3 million. Several Computing Scales devices were adapted for use in shipyards and factories, where they were used to measure exact quantities of nuts, bolts, and fasteners*[3].

Our repertoire of stories seems to be endless:

- Thomas F. Comerford, president of the Standard Computing Scale Co. of Detroit, was chair man of the Draft Board, Local No 18[4].
- Stan L. Hansen serving as engineer, barely escaped his certain death, when torpedoes missed his US Navy freighter loaded to the brim with munitions[5].
- George Stimpson, plant manager of the Stimpson Scale & Electric Co. in Northville, Michigan,was happy to report that his son, Reid, had returned home[6].
- In 1918 the cost of living had risen by 64.6% to the dismay of the population. An ad[7] with a balance shows that government-imposed regulations are part of the reason for mounting prices.
- Business loans were limited, so Walter F. Stimpson's new venture in Louisville, Kentucky, had to wait till 1919.
- Mell Barnes' dream of having his own company came true a year later. Originally he was Mr. Stimpson's banker, later working in managing positions for Stimpson and successor scale companies, and certainly he knew the business.



DON'T BLAME IT ALL ON THE WAR!

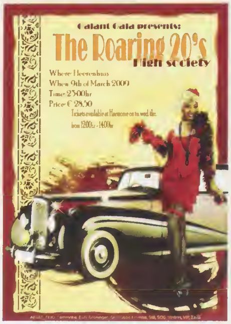
Do YOU know that the price of many articles you buy is materially increased by laws which add to production costs, imposing unnecessary or excessive taxation and fomenting discord instead of promoting good will between wage-earners and wage-payers?

YOU complain of high prices, but have YOU ever done anything to discourage these price-boosting factors?

**DON'T KICK AT THE PRICE
KICK AT THE REASONS!**

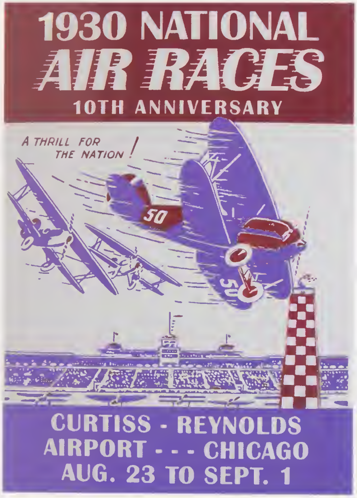
The following years' ups, the *Roaring 20s*, and especially the downs, *The Great Depression*, might have given Walter Stimpson quite a workout; yet they gave him a new challenge. He had kept one foot in Northville until he sold his buildings in 1926, to the Stinson Aircraft Corporation, a thriving new company. This contact and the ever growing popularity of air races, "A Thrill for The Nation," and Eddie Stinson[8], still flying as a stunt pilot, might have familiarized him with a desire to keep the airplane engines running at a constant revolution (RPM) in its most economic range and then change the pitch of the propeller to control the thrust and change the airspeed. Walter rolled his sleeves up and filed in March and June 1930, together with Murray K. Patten of Dayton, two patents for an *Apparatus For Varying the Pitch of Aeroplane Propeller Blades* and a *Controllable Pitch Propeller*. This was about two years prior to the introduction of the first practical controllable pitch propeller[9] in 1932. This development was closely followed by the Air Force to gain superiority for the war—the technology tested in the air races became the proving grounds for WWII fighters.

Roaring 20s



Galant Gala presents:
The Roaring 20's
High society
Where: Heerenhuis
When: 9th of March 2009
Time: 23:00hr
Price: € 28,50
Tickets available at Harmonie on tu wed thr
from 12:00hr - 14:00hr

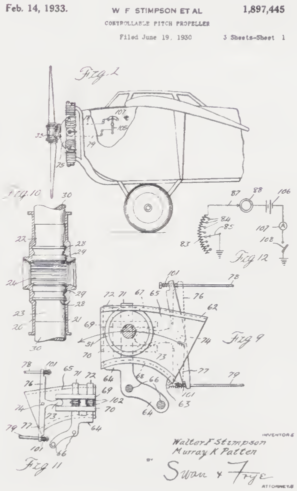
Great Depression



1930 NATIONAL
AIR RACES
10TH ANNIVERSARY

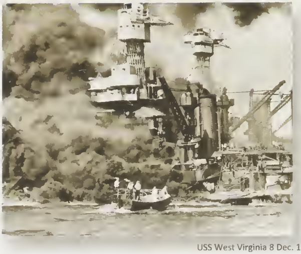
A THRILL FOR THE NATION!

CURTISS - REYNOLDS
AIRPORT - - - CHICAGO
AUG. 23 TO SEPT. 1



Feb. 14, 1933. W F STIMPSON ET AL 1,897,445
CONTROLLABLE PITCH PROPELLER
Filed June 19, 1930 3 Sheets-Sheet 1

Pearl Harbor – Start of World War II



USS West Virginia 8 Dec. 1941

- Regulate the production and allocation of materials
- Convert & expand peacetime industries
- Establish priorities
- Rationing

WPB

Established
Jan 16, 1942
FD Roosevelt
Source Wikipedia

WWII was now around the corner, and let's see what was new in the world of scales. Even though not actively involved, the US supported China in 1931, when Japan invaded Manchuria and five other provinces. The US involvement started to change in 1940 with the supply of war material to England followed by imposing in 1941 a trade embargo on Japan for every raw material of importance. Japan's reaction was a surprise, and hell broke loose on December 7, 1941, with the attack on Pearl Harbor. A major part of the US Pacific Fleet was destroyed, planes were turned into piles of rubble, 2,402 Americans were killed and 1,282 wounded[10]. A month later the *War Production Board*, established by President Franklin D. Roosevelt, took the reins of the American industry and ran everyone's life. Detroit became the *Arsenal of Democracy* with its major concentration of industry around the automotive companies. But the war efforts branched out; everyone at every location became part. MEN and MATERIALS became the most precious commodities[11].

Detroit: Arsenal of Democracy

Do the job HE left behind
We Can Do It!

Rosie the Riveter

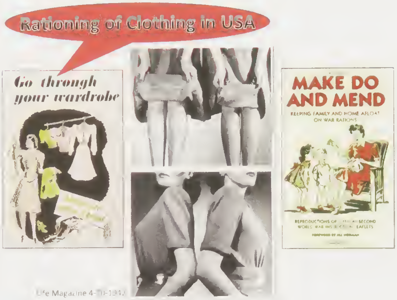
Uncle Sam recruited, if possible, every able-bodied man, still using the Army Navy Scale mentioned at the beginning of this article. The

"OF COURSE I CAN!
I'm patriotic as can be—
And ration points won't worry me!"

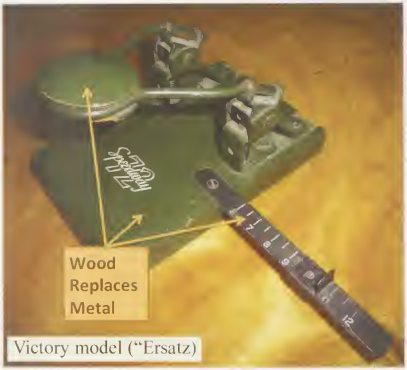
The Can-Bee

gap in the badly needed workforce grew. So the women stepped in and took over the "job he left behind." *Rosie the Riveter* became the inspiration. Only a few of us are aware that women carried the major burden of the war. A woman with children was suddenly confronted with: the shortage of food with its partial solution to start a Victory Garden and canning, rationing also of clothing, the lack of simple household goods, the question of how to get to work and most of all to learn a new job, very likely with a mechanical background. President Roosevelt understood how to bring the nation together, to make sacrifices and identify themselves with the task ahead to win the war—the need for VICTORY.

Certainly materials were a bottleneck for the armament production, especially thinking of the ocean-going Liberty Ships built within two weeks, and tanks, planes, trucks, jeeps and guns of any kind. The War Production Board (WPB) regulated and rationed materials. Talking about our favorite subject, scales, it needs to be mentioned that steel was only available for industrial and farm scales.[5.12] The WPB ordered Toledo Scales to discontinue retail scales. Hanson also had to end its household scale production. The same happened to all of them. Victory models came into the market with stripped down use of steel, brass and other materials needed for the war. The shown hole-punch is an example. "Ersatz," the German word for "replacement" was used, perhaps as a reminder of who to "thank" for the poor version.


Rationing of Clothing in USA
Go through your wardrobe
MAKE DO AND MEND
KEEPING FAMILY AND HOME AFLOAT ON WAR RATIONS

Life Magazine 4-[illegible]-1942



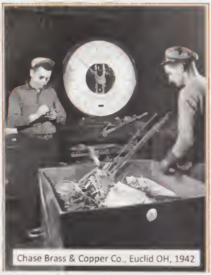
Victory model ("Ersatz)

Even nylons were in short supply because parachutes had priority. But that did not discourage the American "girls." To look pretty was important even in those days; so makeup on the legs and a straight line with the eyebrow pencil at the back of the leg gave the impression of the real thing. Scrap drives were another way to find materials, and many of the outdated clunky scales, now hard to come by, found their way to the junk pile. Actress Rita Hayworth made herself a name with her *Bumper Crop*. The car certainly drove without one, and it even saved a bit

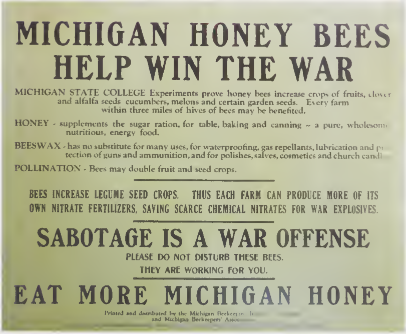
SCRAP
MAKES
GUNS, TANKS, SHIPS
SUN OIL LABOR-MANAGEMENT WAR PRODUCTION COMMITTEE
PUT IT
HERE

Nothing was sacred

Rita Hayworth's
"Bumper Crop"


Chase Brass & Copper Co., Euclid OH, 1942

of the precious gasoline, also in short supply and rationed. Above all, believe it or not, the War Production Board even solicited the help of bees. A poster states: *SABOTAGE IS A WAR OFFENSE*[7]. Those busy insects contributed their honey as sweetener, the wax could do waterproofing, and their pollination freed up nitrate fertilizers needed for ammunition. Wow! It is not mentioned that they might be trainable to attack the enemy with a properly placed deadly sting (just kidding!).


MICHIGAN HONEY BEES
HELP WIN THE WAR

MICHIGAN STATE COLLEGE Experiments prove honey bees increase crops of fruits, clover and alfalfa seeds cucumbers, melons and certain garden seeds. Every farm within three miles of hives of bees may be benefited.

HONEY - supplements the sugar ration, for table, baking and canning -- a pure, wholesom nutritious, energy food.

BEESWAX - has no substitute for many uses, for waterproofing, gas repellants, lubrication and p tection of guns and ammunition, and for polishes, salves, cosmetics and church candl

POLLINATION - Bees may double fruit and seed crops.

BEES INCREASE LEGUME SEED CROPS. THUS EACH FARM CAN PRODUCE MORE OF ITS OWN NITRATE FERTILIZERS, SAVING SCARCE CHEMICAL NITRATES FOR WAR EXPLOSIVES.

SABOTAGE IS A WAR OFFENSE
PLEASE DO NOT DISTURB THESE BEES.
THEY ARE WORKING FOR YOU.

EAT MORE MICHIGAN HONEY

Printed and distributed by the Michigan Beekeep
and Michigan Beekeepers' Asso

Scale companies, experienced with precision work using specialty machinery, were heavily integrated into the production of armaments. Let's not forget, they had freed-up capacity because making new scales for household and retail was stopped. So they delved in. Hanson made toolboxes, steel grommets and milled steel blocks for gun sights. John Chatillon & Sons, aside from scales, had been producing knives since the 1890s and switched to making the Hospital Corps Knife, a general purpose field tool for the Marine Corps. Immediately the company requested a change for the handle material from the scarce apple wood to the more common birch, beech and maple, and they

WWII Hospital Corps Knife

even replaced the brass used in rivets in 1943. Priorities, priorities. We hit the jackpot of information during the research on the Toledo Scale Co.[12.14] They made little stuff like lock washers, high explosive shells, and turret gears for the B-29 Super Fortress, but the prize was the top-secret development of bomb sights and a gun fire control. Possibly this is in connection with the fact that Toledo Scale president Hugh Bennett served two years as a "dollar-a-year" man in the machine tool division of the War Production Board.

(Above) A group of the 120 mm 'strato-sphere A. A guns, containing Toledo-built fire-control components. (Below) A close-up of one of these great guns in action (Signal Corps Photo).

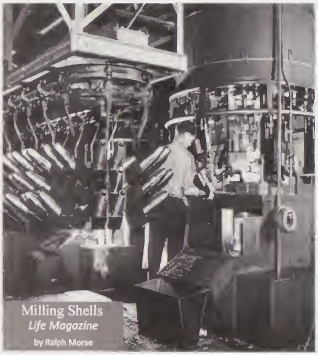
TURRET GEARS FOR SUPER FORTRESS BY TOLEDO

The Super-Fortress. Gears for the power operated turrets are manufactured by Toledo (A.A.F. Photo).

But our cherished find was the 1942 WJR interview[13] at the Barnes Products (Scale) Co. It was in fact our first find, though not mentioned in the introduction. Funny enough, having the Detroit Automatic ad, the Toledo brochure, and the following interview, we thought that we had everything out there concerning the war years. We are sorry you cannot hear the sound, but we at least give you the text:

Bill O'Melia: Mr. President, I'm Bill O'Melia. Right now we're in the plant of the Barnes Products, Incorporated in Detroit. We're a small outfit compared with many plants around here, but we want you to know we're behind you one hundred percent and that we're all out for this job of winning the war.

The Barnes family has been making computing scales for about fifty years. You'll find their scales all over the world and good scales too because I helped to make them. Now, we're feeding parts into the big plants of Detroit so that they can do the job that you want done. Our plants switched over to defense work and us fellas who have made scales most of our lives are now doing something different.



Milling Shells
Life Magazine
by Ralph Morse

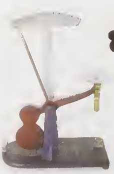
> *Curly Holzapple over there has been a scale painter for forty-five years. Now he's operating a milling machine and doing a good job of it too. I sealed scales for around twenty years and I'm running a screw machine now and the boss says I'm doing fine. I suppose there are hundreds of thousands of fellas like me and thousands of small plants like the Barnes Products that have swung over one hundred percent to winning the war. The big plants get their names in the papers, but believe me us little fellas are doing an important job too.*
>
> *Well, I've got to go back to work now. Just want you to know we'll see you through.*

Aired shortly after the losses in Pearl Harbor, this interview is a masterpiece. The sincerity of the last words, "*...we'll see you through,*" are heart-wrenching, and it confirms that the population stands behind President Roosevelt, strengthening his position and supporting his goal of a victory.

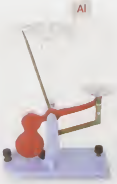
Zenith Egg Scales

Lowest Mfg. Cost

Magic – Egg Scale turns Color

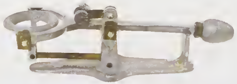


Pot Metal
1930s to 1945

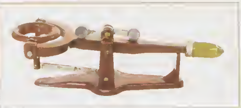


Post-War
Abundance of **Aluminum**

Pre & Post War

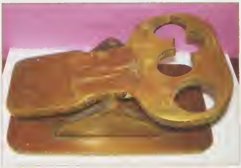


WWII
Colors
✓ Cream
✓ Brownish Red
✓ Marbled C / BR

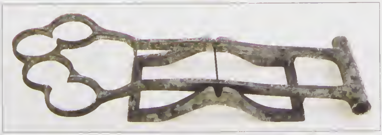


Let's think for a moment about food and the war's appetite for eggs. By the way, selling eggs was, for the farmers, one of the few cash sources. Aside from selling to the public, The War Department was their big customer, with the need to feed the soldiers and support as well the overseas allies. The requirements were graded eggs with, in return, the payment of a slightly higher price of 4 to 6 cents a dozen. No wonder that the production of egg-graders rather increased, and as farm scales, there were no material limitations. Nevertheless it was still advisable to use pot metal instead of aluminum or even stoop to using wood.

Handee Egg Scales
Ontario, Canada



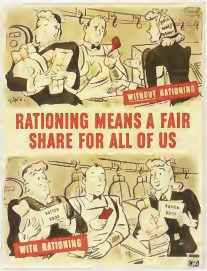
Wood - likely WWII



Aluminum
September 1945

Continuing with food brings us back to rationing. For eyes-on experience, be transported back in time and watch the nine-minute movie, *Rationing in Britain*, on YouTube – Imperial War Museum collection. It was made for distribution in the USA, giving an example how Britain solved the issue. Each member of a typical family demonstrates how rationing

impacts it. There are father, mother, a daughter working in a factory, and a schoolboy. Interestingly, on the counter are the boxes of powdered eggs and the mentioning of its origination in USA. Rationing is a revolution. Rich or poor, young or old, everyone gets the same ration—a quite novel idea. But the best part is, even though the ration is small, you can count on getting it. Co-author Utz can remember bits of the war and post-war times, then being in the Russian sector of Germany. He was astonished seeing that people in the US had the possibility to get a can of pineapple for 24 points. He saw them for the first time in 1950, at the age of 10, after moving to the French sector of Germany.



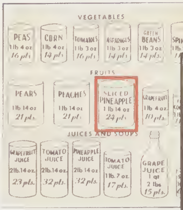
To the Citizens of
the United States
1776 Victory Blvd.
Everywhere in USA

Help Win the War

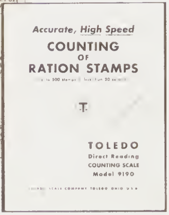
USA 1943

Shoe Line

Boy
with his
Ration Books


VEGETABLES
PEAS 1lb 4oz 16 pts
CORN 1lb 4oz 14 pts
TOMATOES 1lb 3oz 16 pts
ASPARAGUS 1lb 3oz 14 pts
GREEN BEANS 1lb 3oz 14 pts.
SPINACH 1lb 2oz.
FRUITS
PEARS 1lb 14oz 21 pts
PEACHES 1lb 14oz 21 pts
SLICED PINEAPPLE 1lb 14oz 24 pts
GRAPEFRUIT 1lb 4oz 10 pts
JUICES AND SOUPS
GRAPEFRUIT JUICE 2lb.14oz. 23 pts.
TOMATO JUICE 2lb.14oz. 32 pts.
PINEAPPLE JUICE 2lb 14oz 32 pts.
TOMATO JUICE 1lb. 7oz. 17 pts.
GRAPE JUICE 1 qt 2 lbs 15 pts.

? How to count
1000s of Ration Stamps
at end of day ?

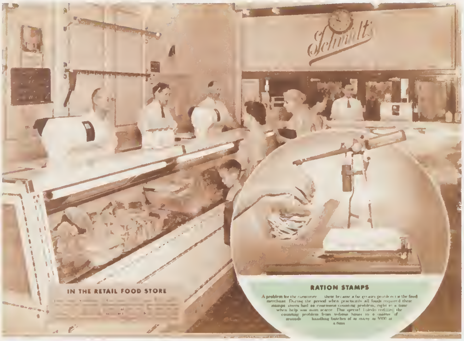


Accurate, High Speed

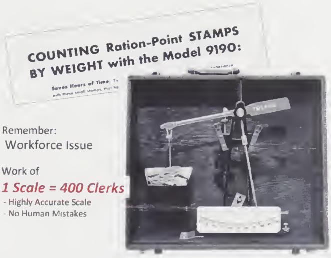
COUNTING OF RATION STAMPS

TOLEDO
Direct Reading
COUNTING SCALE
Model 9190

Fruit jam was made in a one-to-one ratio: 1 Cherry + 1 Pumpkin = Lots of Cherry Jam. No wonder that he frowned after his move to the United States, when his American bride, Shirley, offered pumpkin cake for desert—but since then, he eats pumpkin cake with gusto!



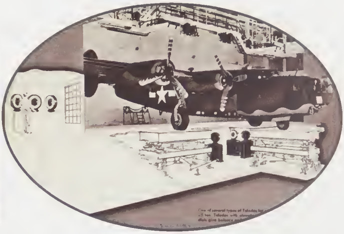
Thinking about all the ration stamps, which needed to be counted at the end of the day, the question immediately comes up how to do it, considering the shortage of manpower. Toledo Scales came out with a Ration Stamp Scale that did the job. One scale performed the work of 400 clerks. Quite impressive. By the way, even the Schmidt's butcher shop had one of those wonders. Make a point to observe the limited supply in the store: no hanging sausages on the racks.



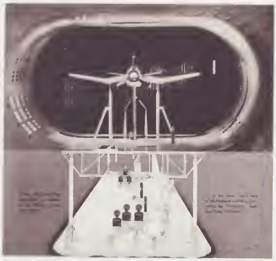
Remember:
Workforce Issue

Work of
1 Scale = 400 Clerks
- Highly Accurate Scale
- No Human Mistakes

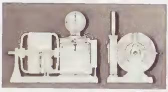
Balancing a Bomber



Now we come to specialty scales used for war production. Most of the examples are from the booklet *Background for Victory*[14]. You have to think big: How do you weigh and balance a complete plane? But there are an endless number of other applications. The incomplete list of examples for planes gives us an idea that a lot of scales helped in the quality control of making parts or building the plane.



Weighing in Wind Tunnel



Torque Dynamometer

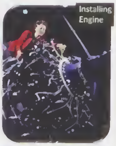
Fuel Consumption of Airplane Engines

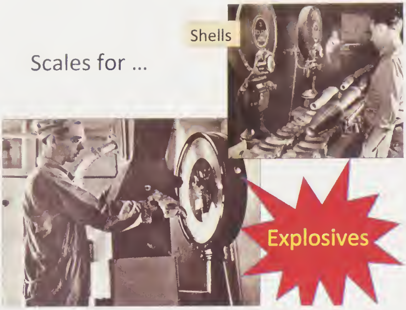
Speaking of quality, a few years back Utz had a short trip on a Liberty Ship, manned with a crew which had served on one of them during WWII. A highlight of the little cruise on Lake St. Clair was the shooting match between the ship and planes from the WWII era, now stationed in a nearby Canadian museum. A veteran pilot, and fellow passenger, talked about his experience. His story: *The plane's engine was the last item to be installed. After filling the plane with fuel, a pilot and a gunner took their places, checked the instruments, and rolled the plane past a huge sand pile, which gave the gunner the opportunity to adjust the sights. And off we went on the long trip over the ocean to Europe.*

Specialty Scales for WWII

Examples for aircraft

- Balance aircraft
- Engine torque
- Compression
- Fuel consumption
- Balance propeller blades
- Check spring forces
- Connecting rod scales
- Counting scales
- Printing scales

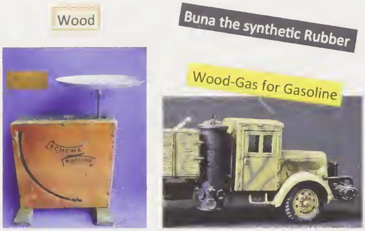




I remember only two occasions when a plane had to make an emergency landing thanks to the care of well-trained women workers and quality control.

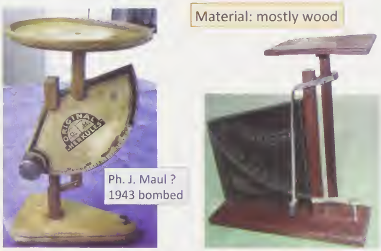
Unfortunately we don't have too much to report from the post-WWII times. Certainly it was a struggle for all companies to reconvert from war to civil production. Smaller companies had no chance during the turbulent times to think about future development. Money and materials were scarce; so after some lingering they closed their doors like Barnes Products in 1947. The Hanson Scale Company had a slow start because of a sheet steel shortage. Stan L. Hansen joined the company after his return from the war, and they produced pre-war products with what was available. New product development took its time. Toledo, on the other hand, had waiting in the wings a new line of both industrial and retail scales and food machines. They had been ready to fill the void after the end of the war. But also they needed to wait for the returning men to reorganize production and retrain their workforce. This was a time when plastic materials gained a major momentum and found their way into scales.

Material Shortage in Germany

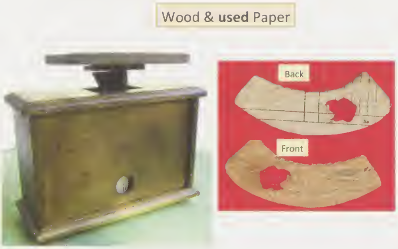


WWII certainly had a major effect on Germany. The material shortage was even more severe, and the country was cut off from supplies from abroad, one of them being rubber. The invention of Buna as a replacement with the enormous manufacturing facility, and wood-gas as a gasoline replacement, overcame some of the shortfalls. But if scales for the private sector were needed, they were made mostly from wood. Lead, zinc, porcelain and glass were

Material Shortage in Germany



Material Shortage in Germany



WWI & WWII Weights
in Germany & Europe

WWI – Brass → Iron

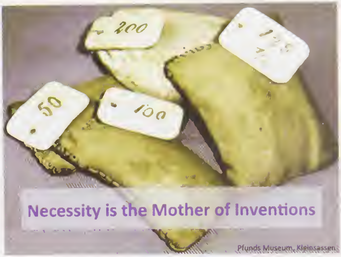
Porcelain

Glass

Lead

Zink

M&G Jahresband 2008, pg 15 to 71
Klaus Schroeter & Gregor Linkenheil

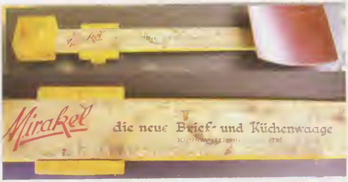


Necessity is the Mother of Inventions

Pfunds Museum, Kleinsassen

used for weights, and necessity, as the mother of invention, came up with hand-sewn small linen bags filled with metal scrap and fine gravel. It is possible that they date back to WWI[15].

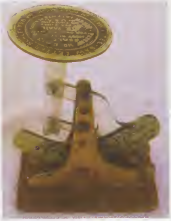
A Mirakel - Out of Wood



WWII

Usage Household Scale with tray
Letter Scale w/o tray

By WWI & WWII Vet R. M. Bowman



Post WWII
Material Shortage
in USA

Now in conclusion, there is one more US scale, made between 1947 and 1950. It is the invention from R. M. Bowman, veteran of both World Wars. Being aware of steel as a precious commodity, he used wood and Plexiglas. It is a treasure-a quite cute scale and a memento of the hard war-times and those who did not return home.

Notes & References:

1. *Scientific American*, May 26, 1894, Vol. LXX – No. 21
2. *American Industries, The Manufacturers' Magazine*, August 1917, Vol. XVIII
3. *Thomas Watson, Sr.: IBM and the Computer Revolution*, Robert Sobel, 1981, p. 63.
4. *The City of Detroit, Michigan 1701-1922*, Clarence M. Burton, 1922, Vol. IV, Pg. 680.
5. *Book of Scales*, Stan B. Hanssen, 2007
6. *The Northville Record*, Northville, Mich., 1918
7. Posters, news clips, tidbits from research on multiple Internet sites for WWI and WWII
8. "Stinson Aircraft Co.," Wikipedia
9. "Controllable Pitch Propeller," Wikipedia
10. "Pearl Harbor," Wikipedia
11. Henry L. Stimson was Secretary of War during WWII, Secretary of State under Hoover and Secretary of War under Taft before WWI. Henry L. Stimson and brothers George and Walter Stimpson, mentioned earlier, had a common great-great grandfather, George Stimson, who was a Minute Man at the Lexington Alarm to start the Revolutionary War. The "p" was added to "Stimpson" by George and Walter's grandfather, Theodore, between 1850-60.
12. *Honest Weight, The Story of Toledo Scale*, Bob Terry, May 2000, Chapter 17
13. *Man-on-the-Street*, Detroit, Mich., Jan. 13, 1942, by WJR; Library of Congress, American Folklife Center
14. *Background for Victory* - ca. 1944, Toledo Scale Co.
15. *Gewichte, Hohlmasse, Brauseköpfe*, K. Schröter & G. Linkenheil, M&G Jahresband 2008; photos of weights in war times.

Weighing at the Banks 5: Decimalisation

BY NORMAN BIGGS

The decimal debate

The £ s d system, in which a monetary pound was divided into 20 shillings, each of 12 pence, was over a thousand years old. Starting in the nineteenth century there had been many attempts to replace it with a decimal system. It was argued that such a system would maximise the advantages of representing numbers in decimal form, as was done almost everywhere at that time. The algorithms for performing the standard arithmetical operations could then be used without alteration in financial calculations, and the painful contortions needed to deal with multiples of 20 and 12 would be unnecessary. However, rational arguments were not enough, and it was not until the middle of the twentieth century that the tide of opinion began to turn.

In 1960 a joint report[1] of the British Association for the Advancement of Science and the Association of British Chambers of Commerce set out the arguments clearly, in terms that both the public and the industrialists could appreciate. The report was the catalyst for change, and soon the politicians realised that, despite their innate reluctance to take any step that might lose them votes, the time had come. A Committee of Inquiry was appointed. Its terms of reference leaned towards questions of 'how', rather than 'whether', and its report[2] found no substantial obstacles to reform. The government's decision to 'go decimal' was announced in March 1966, and details were given in a White Paper[3] published in December of that year. The changeover was scheduled for February 1971. The thorny question of the new monetary units was settled in favour of a system in which the pound remained as before and was divided into 100 'new pence': £1 = 100p.

Withdrawing the old coins

The new £ p system required significant changes in the coinage, and these were carefully planned over a five-year period. The full details can be found in Noel Moore's official account.[4] The major problem was that the 'old penny' (d) was to be replaced by the 'new penny' (p) at the rate 2.4d = 1 p. Two of the old coins, the shilling (12d = 5p) and the florin (24d = 10p), fitted neatly into the new system, and they were retained. However, most of the other current coins did not fit in so well. For example, the old halfcrown (30d) would become 12.5p, an awkward value, and so this coin was phased out. The same fate awaited the threepenny bit and the old bronze coins.[5]

By this time the major banks had set up 'cash-centres', which handled large amounts of currency. As well as dealing with the distribution of coins and notes to the bank's branches, the cash centres collaborated with the Bank of England and the Royal Mint to ensure that worn coins were systematically withdrawn from circulation. Clearly, they had an important part to play in the preparations for decimalisation.[6]

Figures 1 and 2 show examples of some rather unusual weights that were probably used in the cash centres at this time, although they could also have been used elsewhere. (Recently a couple of them were advertised with the claim that they had been used in a Post Office.) These weights indicate that coins were divided into five categories: mixed silver, sixpences, threepenny pieces, pennies, and halfpennies. As has already been mentioned, pennies and halfpennies had to be weighed separately because they did not satisfy the weight-value relationship, and sixpences were separated from other silver coins because they were relatively more worn. All the weights are made of brass, but the ones for 'silver' coin have a silvery plated finish, those for 'copper' coin have a coppery colour, and those for 3d pieces have the natural brass colour.

There are two types of these weights. In Type A (Figure 1) the lettering has serifs, and the face of the weight has an inner raised rim. In Type B (Figure 2) the lettering has no serifs, and there is no inner rim (some, but not all, have an abnormally wide rim). In both types there are two denominations for each category of coin, as in the following table.

CATEGORY	TYPE A DENOMINATIONS	TYPE B DENOMINATIONS
Mixed silver	£8 £4	£10 £5
Sixpences	£8 £4	£10 £5
Threepenny pieces	30/- 15/-	£2 £1
Pennies	8/- 4/-	10/- 5/-
Halfpennies	6/- 3/-	8/- 4/-

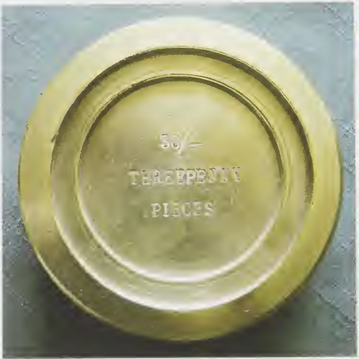


Figure 1. A weight for checking threepenny bits, Type A.

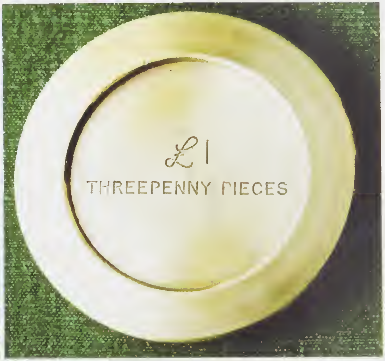


Figure 2. A weight for checking threepenny bits, Type B.

Weighing the decimal coins

The UK changed to decimal currency on 15 February 1971. Despite gloomy predictions in some quarters, the change went smoothly, and was soon considered to be a non-event. New bronze coins of 2p, 1p, and ½p were introduced, and these were handled at the banks in bags worth £1, 50p, and 25p. Weights for these denominations were needed; some of them were labelled with the old term 'copper', but some now carried the correct term 'bronze'.

Since 1969 a cupro-nickel coin worth 50p had circulated as a replacement for the old 10s note. This coin was an innovation, in that it was not round, but technically a seven-sided curve of constant width. It was weighed in bags of 20, worth £10. The other decimal coins were the old shilling and florin, under their new names of 5p and 10p. As before, they were weighed in bags worth £5. Thus five denominations of weights were used for checking coins in the period immediately following decimalisation.[7]

DESIGNATION	COINS	MASS	DATES
£5 silver	10p, 5p	566g	1968-1990/93
£10 x 50p	50p	270g	1969-1998
£1 copper/bronze	2p, 1p, ½p	356g	1971 onwards
50p copper/bronze	2p, 1p, ½p	178g	1971 onwards
25p copper/bronze	2p, 1p, ½p	89g	1971 onwards

Several distinctive types of these sets-of-five were made. One set (Figure 3) is noteworthy because the largest weight displays the name of the Westminster Bank, the only known example of a bank putting its name on weights in modern times. The weights are cylinders of brass, characterised by a wide groove around the body and a chamfered top.

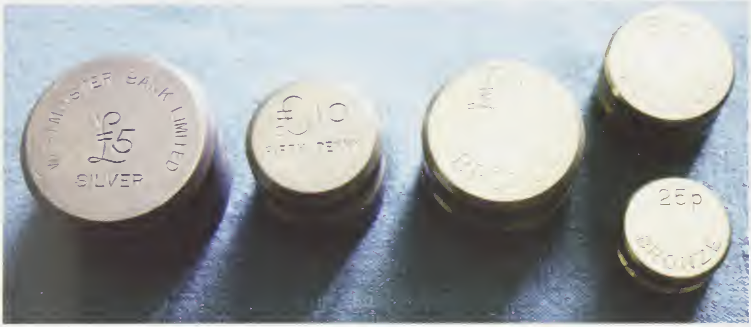
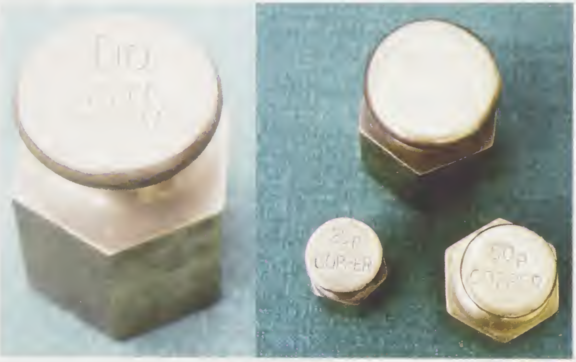


Figure 3. The Westminster Bank set-of-five for decimal coins.



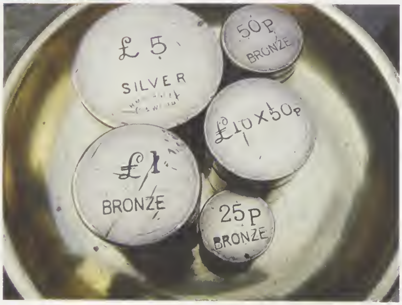
Another set of brass weights for decimal coins was made by Avery's. They were similar in style to their earlier cylindrical ones, illustrated in Part 4, Figure 3, but the cross-section was hexagonal, rather than round (Figure 4). As far as we know, there was no hexagonal weight for £5 silver, presumably because the old round ones could still be used.

Figure 4. Avery's hexagonal type, lacking the £5 silver denomination.

A simpler style was adopted by H.M. Stanley, whose firm was very active in the scale trade from the 1950s onwards. His weights for decimal coins were made of brass, cylindrical in form, and had narrow grooves around the body (Figure 5).

Sets-of-five were also made for use with the Omal Universal Money Checker. The first ones were similar to the pre-decimal weights illustrated in Part 4, Figure 5, with exactly the same weight for £5 in silver (Figure 6).

Figure 5. H.M. Stanley's set-of-five weights.



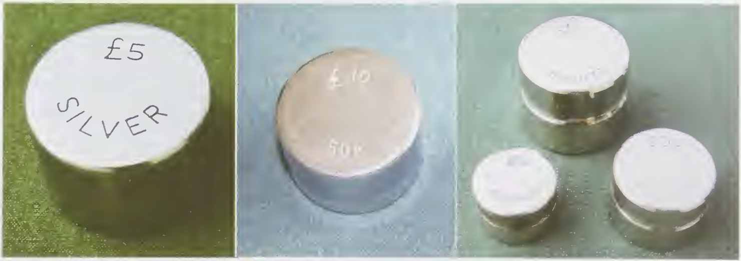


Figure 6. Plain set-of-five for the Omal Money Checker.

An interesting variant of the Omal style is shown in Figure 7. Clearly such weights were intended for use on a machine where the weights were suspended by their hooks, rather than placed on a scale-pan. Two curious features are that the weights for 25p, 50p, and 100p are in reverse order of size, and there is no £5 silver weight. These features are explained by the fact that the machine was pre-weighted to check a bag of £5 in silver, and so the weights had masses of 566 – x grams, where x is the value given in the Table above.[8]

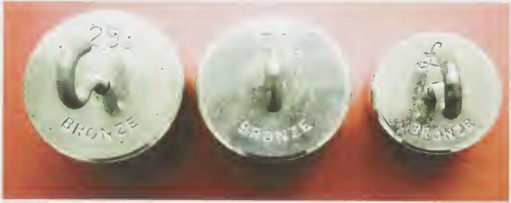


Figure 7. Hooked weights for an Omal machine.

A third variety of Omal weight was introduced in the 1970s, with the denomination indicated by a coloured plastic label. A set of five is shown in Figure 8. Many more weights of this type were to be made in the 1980s and 1990s, and these will be described in the final part of the article.

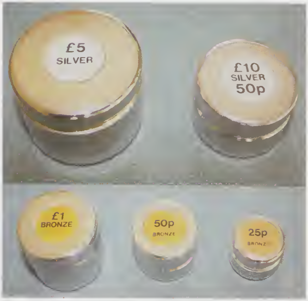


Figure 8. Set-of-five Omal weights with plastic labels.

Notes and References:

1. *Decimal Coinage and the Metric System.* Should Britain Change? London: Butterworth, 1960.
2. *Report of the Committee of Inquiry on Decimal Currency.* London: HMSO, 1963.
3. *Decimal Currency in the United Kingdom.* London: HMSO, 1966.
4. N.E.A. Moore, *The Decimalisation of Britain's Currency.* London: HMSO, 1973.
5. The farthing had disappeared in the 1950s. For various reasons the old sixpence was allowed to continue after decimalisation, circulating as a 2½p coin until it was withdrawn in 1980.
6. See Chapter 17 in Moore.4
7. Although over 1000 million of the new ½p coins were minted in 1971, these coins were never popular. In fact, they soon became redundant as the result of inflation and were withdrawn in 1984.
8. The Omal hooked types were also made in 'pre-decimal' denominations, such as 100 10s notes.

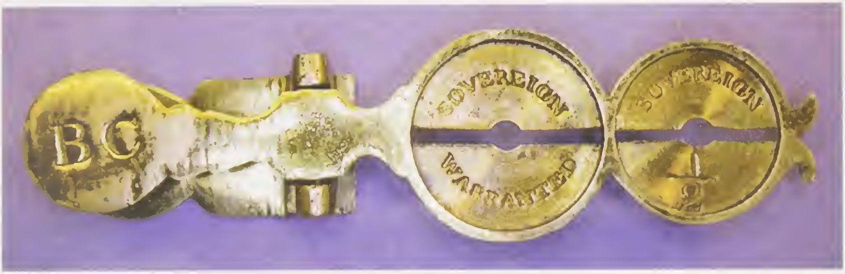
‘B. Cattle’ and ‘Cattle’s Patent’ Sovereign Rockers

BY MICHAEL FOSTER

B. Cattle produced the first rocker balance designed to provide a quick means of determining the amount of gold missing from a sovereign or half sovereign.

The author has been looking at a series of standard and non-standard sovereign rocker designs made by Bennett Cattle of Birmingham.

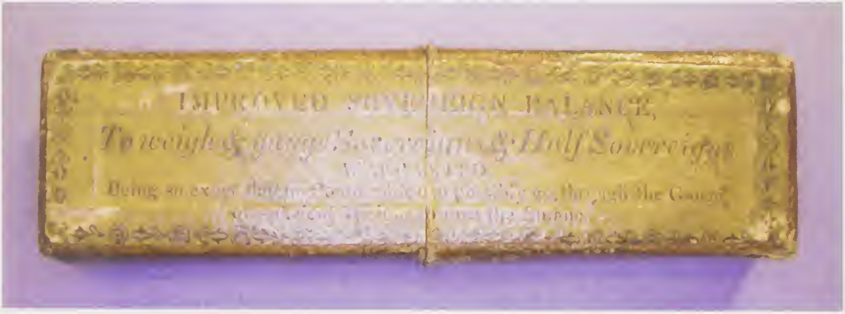
It appears that Cattle’s early sovereign rocker offerings had no maker mark crown stamp, only his ‘BC’ initials stamped on the poise and ‘B. CATTLE’ stamped on the base.



‘BC’ on the poise rocker.

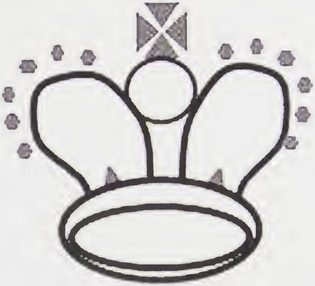
Side view of ‘BC’ rocker

Base of the ‘BC’rocker with ‘B. Cattle

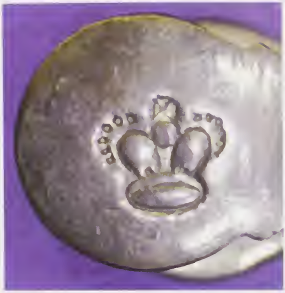


Box label reads: “**IMPROVED SOVEREIGN BALANCE**, / *To weigh & gauge Sovereigns & Half-Sovereigns* / WARRANTED / Being so exact that no Counterfeit can possibly go through the Gauge, / of sufficient Weight to turn the Balance.”

Cattle eventually settled on a standard rocker design which is often labelled with the 'B. CATTLE' name on the beam and base, and the crown stamp, D7, on the poise:

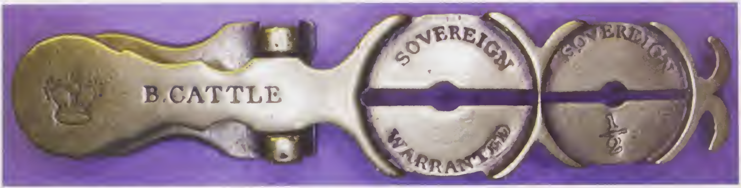


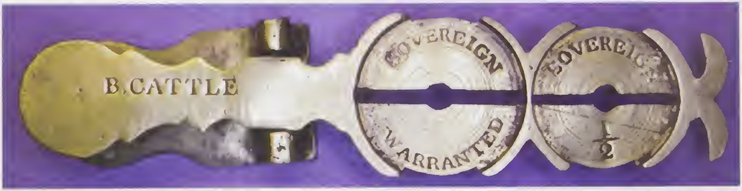
D7: Drawing: 'B. Cattle' crown



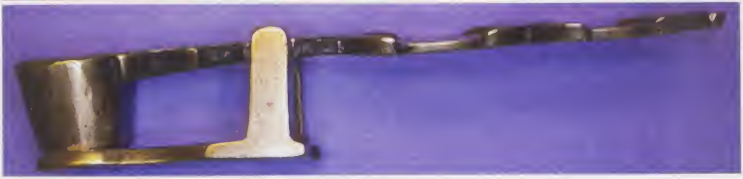
'B. Cattle' crown on poise

The standard rocker design is found in one basic style with a variety of poise, base and beam labelling, shown below:



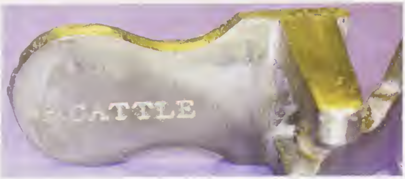


'B. CATTLE' on beam, with and without the crown

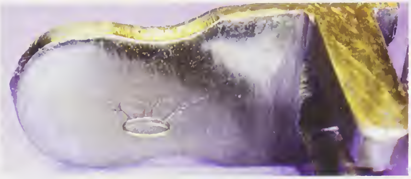


Side view of 'B. CATTLE' rocker

The base was generally made of brass and labelled with ‘B. CATTLE’ or his maker mark crown:

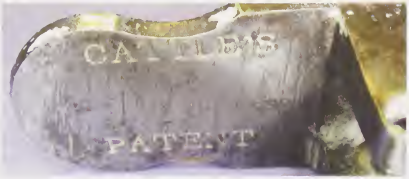


Base with ‘B. CATTLE’



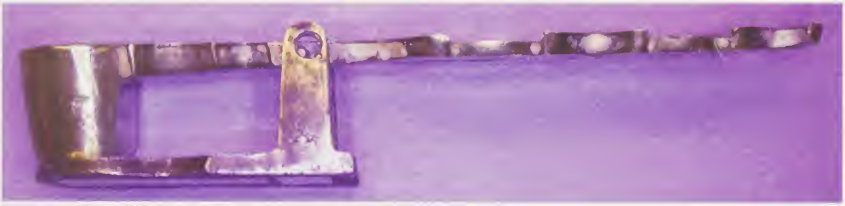
Base with crown

In the case of the ‘CATTLE’S PATENT’ rockers, the base was made of blued steel.



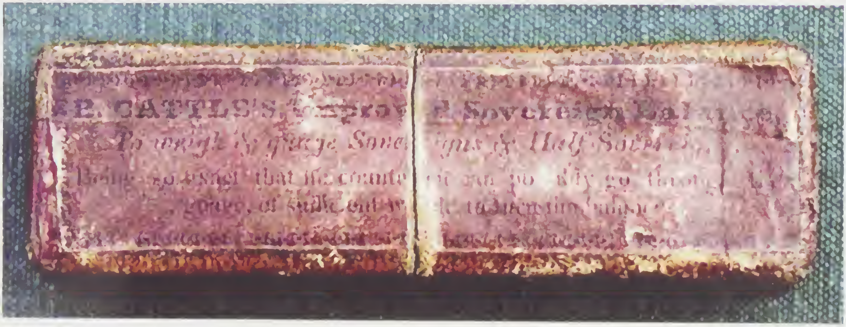
Steel base with ‘CATTLE’S PATENT’

The blue steel base was an alternative to inserting steel bushings into the pivot holes which are left open.



‘B. CATTLE’ rocker side view, with steel base and open pivot holes

These rockers were generally sold in a cap-end box similar to:

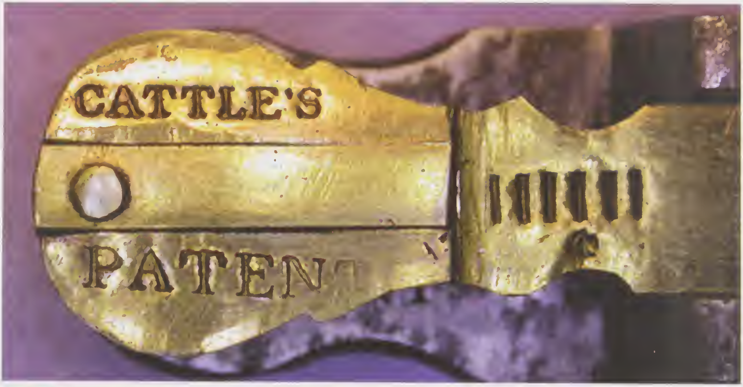


Box label reads: “B. CATTLE’S Improved Sovereign Balance / *To weigh & guage Sovereigns & Half-Sovereigns* / Being so exact that no counterfeit can possibly go through the / guage, of sufficient weight to turn the balance.”

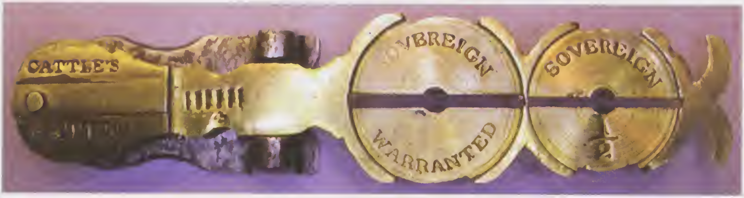
"The 'CATTLE'S PATENT' slide balance"

Cattle was the first sovereign balance maker to introduce a non-standard design which provides a quick means of determining the amount of gold missing from a gold sovereign or half-sovereign. Cattle added a miniature sliding scale to the poise of his standard rocker design.

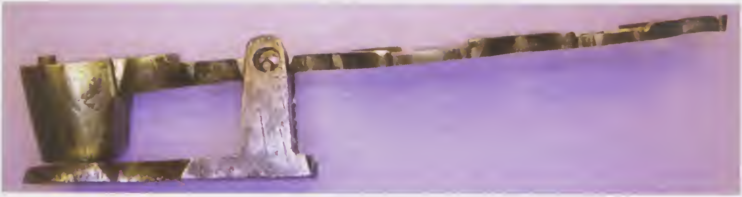
The beam was set to be level if the coin was the "least current weight" set by Royal Decree. If the coin did not tip the beam to level, the slide was moved until the beam would level, and according to the box, the amount of lost gold in grains was read off the scale shown here on a "CATTLE'S PATENT" rocker that was available before 1830.



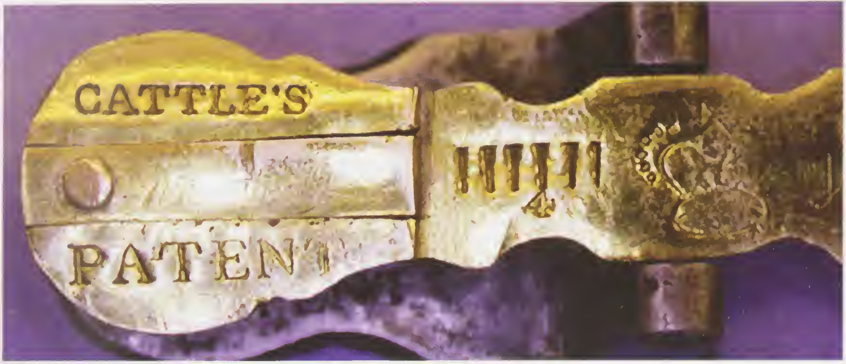
'CATTLE'S PATENT' with slide on poise, pre1830



'CATTLE'S PATENT' slide balance with steel stand, pre1830

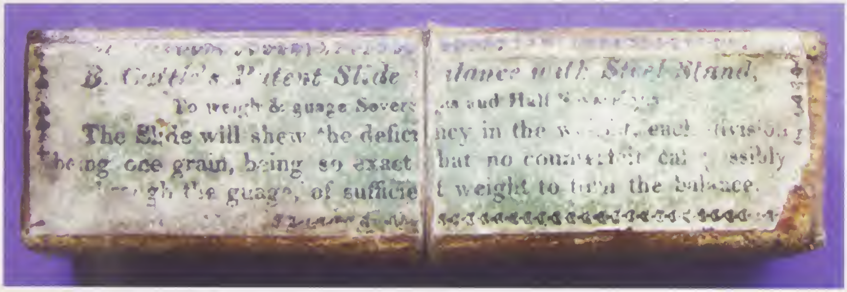


This rocker is also found with a crown on the beam as in this poorly stamped example:

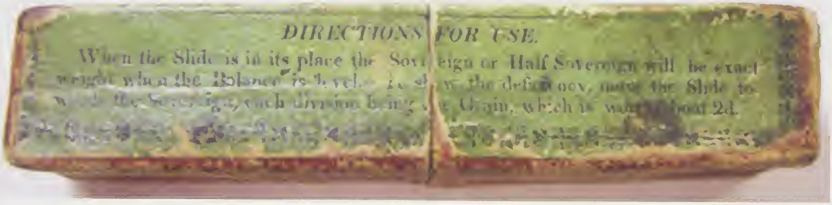


'CATTLE'S PATENT' with slide on poise and crown on beam

The Cattle's Patent slide balance with steel stand was also sold in a cap-end box:



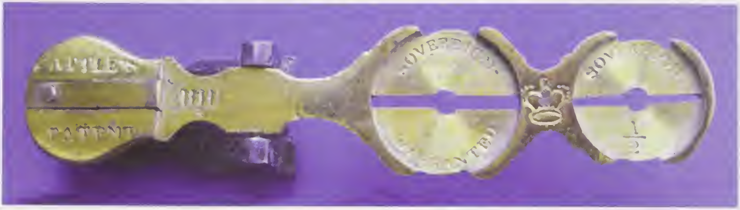
Box label reads: "B. Cattle's Patent Slide Balance with Steel Stand, / To weigh & guage Sovereigns and Half-Sovereigns. / The Slide will shew the deficiency in the weight, each division / being one grain, being so exact that no counterfeit can possibly / slip through the guage, of sufficient weight to turn the balance."



The "DIRECTIONS FOR USE" found on another box indicate: "When the Slide is in its place the Sovereign or Half Sovereign will be exact / weight when the Balance is level. To shew the deficiency move the Slide to- / wards the Sovereign, each division being one Grain, which is worth about 2d."

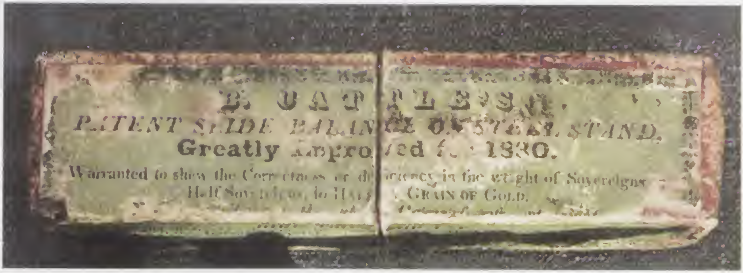
Tests by the author on this Patent Slide balance show that each division of the scale more accurately reflects ½ grain deficiency in weight or approximately 1d. per division. The test was done with a W&T Avery sovereign weight which is 122½ grains and a W&T Avery Two Dram weight which is 120 grains. With the Two Dram weight it took moving the slide five divisions, representing 2½ grains, to balance the rocker to the same point as the sovereign weight.

In 1830, Cattle introduced a new design which his box labels advertised as "Greatly Improved for 1830". This new Cattle's Patent slide balance has a similar slide, but no finial and a space added between the platters where his maker mark was placed. One assumes the changes were to improve the accuracy of the scale.



'CATTLE'S PATENT' slide balance, greatly improved for 1830

The greatly improved for 1830 Cattle's Patent slide balance was sold in cap-end boxes like this:



Box label reads: "B. CATTLE'S / PATENT SLIDE BALANCE ON STEEL STAND. / Greatly Improved for 1830. / Warranted to shew the Correctness of deficiency in the weight of Sovereigns or / Half Sovereigns, to HALF A GRAIN OF GOLD."

This label seems to be more accurate about each division on the Patent slide representing a deficiency of ½ Grain of Gold which agrees with tests done by the author on this new balance.

So who was B. Cattle? From Birmingham Directories we find Bennett Cattle, brass founder, brass moulding and hearth brush tip manufacturer, Windsor St. with dates known from 1828 to 1831.

Bennett Cattle

1828-9	Bennett Cattle, brass founder, Windsor St, Birmingham, DR#6, p.769, p.784.
1829	Bennett Cattle, Balance Makers for Sovereigns, Windsor St, Birmingham, DR#7, p.30.
1829-30	Cattle, Bennett, brass founder, brass moulding & hearth brush tip manufacturer, Windsor St., Birmingham, DR#8, p.19, p.115 under Brass Founders.
1830	Bennett Cattle, brass founder, brass moulding & hearth brush tip manufacturer, Windsor St, Birmingham, DR#9, p.319, p.415.

Bennett Cattle made and sold sovereign balances for a short time from 1828-1831, during one of the peak sales periods of sovereign balances in the 19 century British market. He differentiated his offering with his 'Patent Slide Balance' which was the first attempt to provide a quick means of determining the amount of gold missing from a gold sovereign or half-sovereign with a rocker balance that didn't involve the use of separate grain weights.

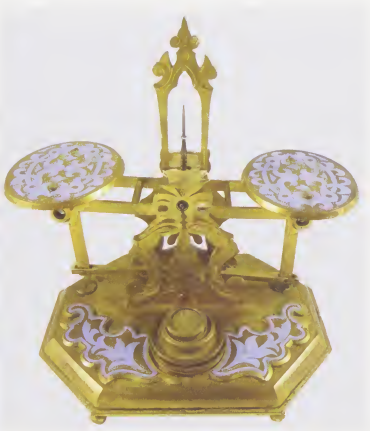
Acknowledgements:
Special thanks to Diana Crawforth-Hitchins and Norman Biggs for providing some of the photos used in this work.

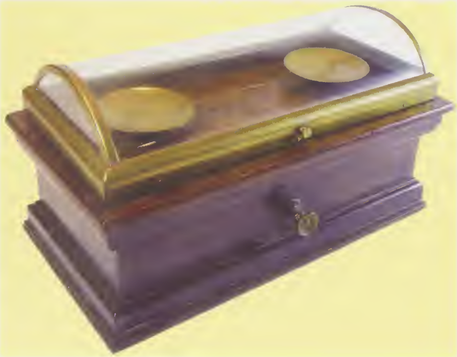
Notes & References:
Reference my Book: *Coin Scales: British Rockers and Their Markings*.

Showcase

This unmarked roberval letter scale can easily be attributed to Mordan as its decorative engravings and blue enamel decoration is indicative of his work. Made of gilded brass, it measures 6½" tall. The octagonal shaped base measures 5$\frac{15}{16}$" wide by 4$\frac{9}{16}$"deep.

Eric & Judy Soslau Collection.





This unmarked pharmaceutical balance is constructed of wood and brass with a domed glass hinged lid. The base measures 13" long by 6½" and the scale is 6¾" high.

Joan Pugsley Collection.

The Acme Egg-Grading Scale, Before the Patent was Issued

BY CHARLEY AMSBAUGH

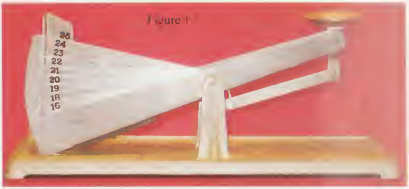


Figure 1

Almost everyone who has even a couple egg scales in their scale collection will find the Acme Egg-Grading Scale, with the notation Pat. June 24, 1924, a familiar sight (Figure 1). Avid egg scale collectors will recall from Bob Jibben's EQM article on "Acme Egg Grading Scales" (pp. 3330-3334) that the Acme was produced in 12 different grading ranges. As it turns out, the Acme was produced in at least one more grading range, 19-20-21-22-23-24-25-26-27 ounces per dozen, from late 1922 through mid-1924, while the inventor, Norton Chapman, and the Specialty Manufacturing Company of St. Paul, Minnesota, were waiting for a patent to be issued in response to the application Chapman had filed on September 26, 1922. This pre-patent model is clearly identified by the notation PATENT PENDING (Figure 2) in the same place on the side of the scale where the notation PAT. JUNE 24, 1924 later was placed when U.S. patent no. 1,499,153 was assigned.

Figure 2.

ACME EGG-GRADING SCALE
PATENT PENDING
THE SPECIALITY MFG. CO.
St. Paul, Minn., U.S.A.

ACME EGG-GRADING SCALE
PAT. JUNE 24, 1924
THE SPECIALITY MFG. CO.
St. Paul, Minn., U.S.A.

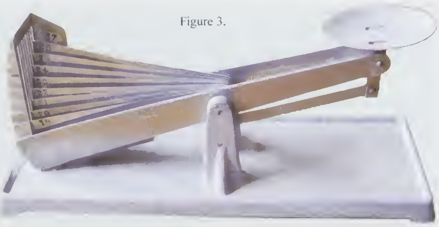


Figure 3.

It is reasonable to assume that Chapman and the Specialty Mfg. Co. used the time before the patent was issued to survey the market and found that six different grading ranges would be required to meet the needs of a market that stretched from the Atlantic to the Pacific, including Canada. As a result, they began production under their newly assigned patent in June 1924 with the California, Colorado, American Poultry Association (A.P.A.), Pacific, Canadian, and Atlantic models, with grading ranges as indicated below. It would appear that the pre-patent range of 19-20-21-22-23-24-25-26-27 (Figure 3)was abandoned before the scale went into full production with its patent date engraved on the side of the scale.

Pre-Patent: 19-20-21-22-23-24-25-26-27 oz. per doz.
California: 15-16-18-20-22-23-23½-25-26 oz. per doz.
Colorado: 15-17-19-20½-22-23-24-26-28 oz. per doz.
A.P.A.: 16-18-20-22-23-24-26-28-30 oz. per doz.
Pacific: 18-19-20-21-22-23-24-25-26 oz. per doz.
Canadian: 18-20-22-22½-23-24-26-28-30 oz. per doz.
Atlantic: 19-20-21-22-23-24-26-28-30 oz. per doz.

Number 131 **August 2012**

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

A Balanced View

Mark Your Calendar

If you haven't made plans to attend one or all of the regional get-togethers, now is the time to circle the dates on your monthly planner.

Midwest Weigh-In, Saturday, September 15 at Harry and Jane Hawley's home in Marion, Iowa

Mid-Atlantic Scale Summit, Saturday, September 29 at Jerry and Mary Katz's home in Downingtown, Pennsylvania

Michigan Scale Collectors Get-Together, Saturday, October 6 at Utz and Shirley Schmidt's home on Lake Huron in Palms, Michigan

All are welcome at each of these events. They are a great way to meet other collectors, especially if you are not able to attend the annual convention. See the flyers with directions in the June mailing of EQM. If you have any additional questions, feel free to contact the hosts. This is a chance to see some great collections, buy and/or sell a scale and enjoy some scale talk with new or long-time friends.

Pittsburgh Convention Home Viewing

Here is an opportunity for those of you who didn't attend the convention in Pittsburgh to see the pictures from the Saturday morning presentations. We are offering a CD of the images from these programs for the nominal charge of $5.00 to cover the cost and postage. Even those who were in attendance will enjoy reviewing these great pictures. The programs presented were *Pennsylvania Scales: Corridor to the West*, *Grain Test-*

Weight Scales Yesterday and Today, *What About the Victorians?* and *Scale Industry Supported Victory*. To receive your copy, send a check or money order to Treasurer Kurt Beyreis or make a PayPal payment to usaisasc@gmail.com. If using PayPal, please note payment for CD in the message section.

A Museum in the Making

The days leading up to the debut of the ISASC Collection at the Pittsburgh Convention were filled with a hectic frenzy to get the show ready to go. The final result could not have been achieved without the herculean efforts of Kurt and Ann Beyreis, Jerry and Mary Katz, Les Firth and Bryan Negrini, all of whom put in countless hours completing the unpacking, organizing, cleaning and setting up the display. Jerry lent his expertise by making cards for items that required a little extra explanation. The credit for the great job on the wall mounted ISASC banner goes to Allan Rodin. He also prepared the large posters listing all the donors and volunteers who have contributed to the collection. Along with Jerry and Mary, Steve and Kathy Barnett served as "staff" while the attendees viewed the collection. Meanwhile, Utz Schmidt might have discovered a new profession for himself as he offered his assistance at "crowd control."

Mary Anne heartily thanks all those involved throughout this past year in getting the collection moved and ready for showing. All the hard work and untold hours paid off as measured by the response from the attendees. There were many very favorable remarks about the size, scope and display of the collection. The greatest satisfaction for those who made it happen came when several commented "this already is a museum".

Always a work in progress, we continue to receive donations. Chuck Lamlein sent two additional shipments of scales. At the convention Barry Silverstein donated a large Howe sign, several boxes of scales and some ephemera. Jack Young delivered the framed advertisements from Dale Goldman, which he drove to the convention from California. An additional group of scales was donated by Norm Cima, as well as an extensive folder of information pertaining to a historic Japanese money scale he had previously donated. Utz Schmidt and Greg Moss presented us with a CD of their research.

Meanwhile, the project of selling off duplicates at auction continues. In the last several months Jerry and Mary Katz have taken two loads to auction. Don and Donna Schoenly have taken a load to the Whalen auction in Ohio. They also drove two loads of scales to Chicago, where they were picked up by a friend of Bob Jibben, and taken to Minneapolis for auction. The sale of duplicate scales and books sold at the Silent Auctions at the Denver and Pittsburgh conventions earned over $900.00. In the last year and a half we have raised nearly $8000 through outside auctions.

The next phase will be to explore ways to obtain outside funding for the ongoing museum project so as to significantly increase our capital base. A number of possibilities have been proposed, and we are still soliciting ideas and/or volunteers to participate in this effort. If you would like to help in any way, please contact Mary Anne at mamurph721@aol.com or by phone at 412-321-5947.

Request for Help

It's always nice to get a request about a mechanical scale still in use by a company. In this day and age scales that weigh groceries at checkout, rolling scales for semis and other types of scales use electronics. The request is from Western Mountaineering which specializes in high quality sleeping bags and down garments. They use an August Sauter Dial Scale (no springs) to weigh products for their company. They have been looking for another Sauter scale for 12 years. If you can help in any way please contact Gary Peterson at www.westernmountaineering.com or by phone at 408-287-8944.

The key features we like about this scale are its accuracy of 1/16 ounce increments, the large dial face, and the fact that the scale allows for 5 revolutions for a total capacity of 10 lbs with the face only reading 2 lbs. The additional pounds are revealed by four cutout windows to show 4 lbs and 8 lbs, etc. when the dial has made more than one revolution on the two pound face. Let me know if you have any ideas or can point me in a direction for where to look next.

New Repair Guy in Town

How often have you wanted to buy a particular scale only to find it is broken or missing a part? Many of us have been in that same predicament thinking "if only" we knew someone who could fix it and/or make a replacement part. Now, (drum roll, please) we are thrilled to be able to offer you the solution to your "if only". Member Jim Dietrich has stepped up and agreed to be our resident repair guy and parts maker for our Special Interest Point of Contact Program. Jim will do his best to try to accommodate requests for repairs and for replacement parts. He is also available to answer any questions you may have about scale repair. Jim has collected a large variation of scales for numerous years and has repaired and restored many in his own collection. He has helped members over the years with repairs and replacement parts, including recently making a cup for a grain scale and a band for a Torsion balance. Jim has generously donated his time and material to repair and replace parts of scales belonging to the ISASC Collection. We thank him for taking on this task. Costs are to be agreed upon between Jim and the person requesting service. Please understand that Jim will tackle these projects as his schedule permits.

Starting a Trend

Membership Chair Shirley Schmidt brought her newest marvel to share with others attending the Pittsburgh Convention. At Show and Tell she shared her Purina weight tape measure inscribed with "FOR ESTIMATING LIVE WEIGHTS OF CALVES, HEIFERS, COWS". Most of us city folk were not aware of such a device. Now it turns out to be just the tip of the iceberg.

As Bob Jibben listened to Shirley's presentation about tapes for weighing animals, he recalled his days as a farm lad, and then Ag teacher, and decided such a tape would be a nice addition to his collection. There was no trouble finding them on eBay, and now he owns both a Swine and a Cow weight tape. The cow tape says *Help Your Cows "Measure Up" with PILLSBURY'S Best Dairy Concentrate*. The Pillsbury advertisement was a surprise to him as he always thought of the company as a flour and food company, not feed for livestock.

Wow! This Heavy??

Phil Wehman was so intrigued after seeing

Yes, we're interested in weighing!

Shirley's new treasure that he went home from Pittsburgh and started a whole new scale search. He didn't get the sought after cow tape, but is now the proud owner of a HOG WEIGH TAPE by Coburn. Phil got back to Shirley bragging about his new addition to his already extensive collection, which then prompted Shirley to do some research on the net. She found some additional versions such as Beef Stock, Beef Stock Metric/Spanish; Weight-By-Breed; Veal Growers, Holstein Dairy; Holstein Calf, Goat Weigh and finally Uncle Jack's Trophy Deer Tape. Shirley thinks these are an absolute hoot and challenges others to find and collect additional versions. If anyone has any of the aforementioned tapes, or another yet undiscovered one, let us know and we will pass it along.

Cast Iron Toy Scales?

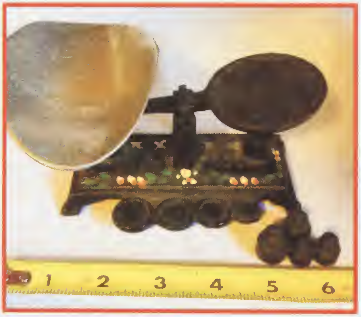


Figure 1

Kurt Beyreis sent us the following: While both of these pictures look like the typical toy cast iron scale with a base about 4½ inches long (Figure 1), actually the one which I bought on a recent trip to Lancaster, PA (Figure 2), has a base of over 10 inches long. It also appeared to be better made than the typical little toy scales. The dealer could not tell me much about the scale since he had bought it at auction a few weeks before in southern PA. The design, the cutouts and the painting are very similar. I have never seen one with the 10 inch base before. What was the larger scale? Just a bigger toy?

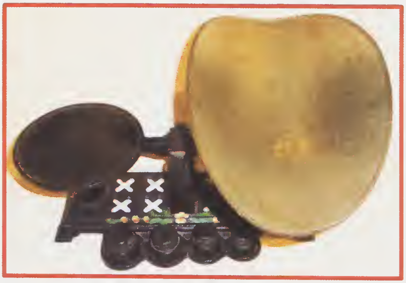


Figure 2

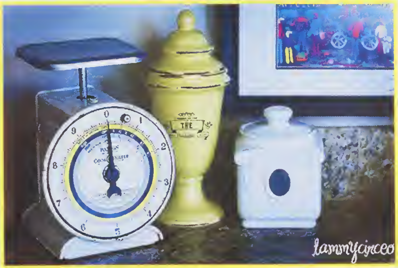
Scales on the Web

There are lots of postings on the internet from people who like scales. The following are a couple of examples. Now we would like to get them to join ISASC!

Tammy Circeo posted this on her blog:

Vintage Scale

I have no idea why, but I've always loved scales. The interest might harken back to my growing up in Europe when almost everything we ordered at the stores was measured on scales...sometimes even with the heavy brass weights on the other side to balance it. That was cool. I was recently browsing through one of my favorite "thrift antique" spots and found a vintage scale that still works! It is a kitchen scale with added measure markings for butter, flour, sugar, and milk (or water) in liquid as well as weight measures. I love the antique white color and the yellow measuring line that matches my French tea canister.



I especially love that the scale still works...I plan to extend its life for quite a while.

Another blog posting is about a Troemner scale that someone uses as a display in their home. Use the link below to take a look at the entire blog. Don't miss reading some of the many comments after the pictures.

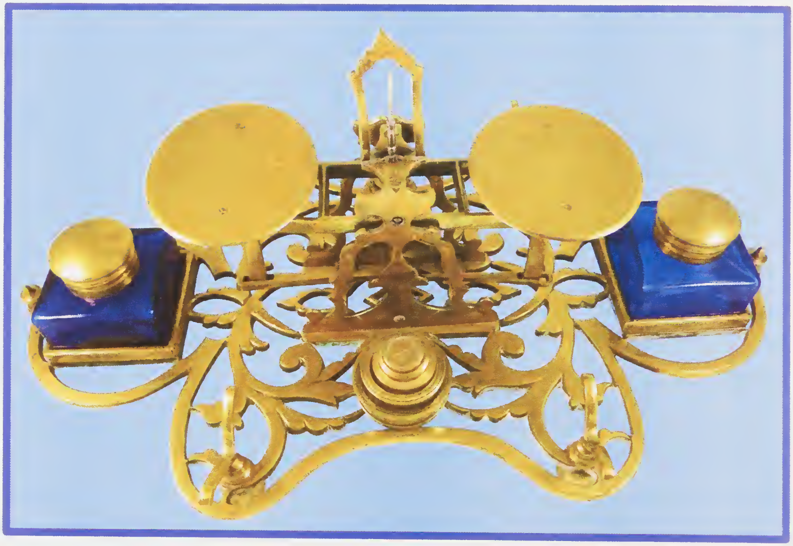
http://sullivanandmurphy.blogspot.com/2012/02/weighing-in-on-my-new-scale.html

Collector's Corner—Sell, Buy and Trade

Member Kurt Beyreis is interested in purchasing the following:
Three rectangular weights for a three step ladder scale. They are ½, 1, 4 ounces, respectively. Please contact Kurt at 540-436-8063 or kbeyreis@gmail.com.

It seems like everyone I talk to is suffering through this hot summer weather. Minneapolis set a record for July with above 90 degrees. However, that doesn't stop the search for that special scale. I found a couple just recently, so July went well for me. Enjoy what's left of summer, and I look forward to seeing many of you at the regional meetings.

Until next time,



ISASC

EQUILIBRIUM®

QUARTERLY MAGAZINE OF THE INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

2012 ISSUE NO. 4 PAGES 3853 - 3880

Cover Picture

This roberval parcel post scale is unmarked but is attributed to Samson Mordan. Its golden oak base measures 9" x 14½ inches and it is 8¾ inches high. It lists the British parcel rates effective January 5, 1886 to January 6, 1887. The parcel plate reads

PARCEL POST

RATES	INSURANCE
NOT EXCEEDING 1 lb 3^{D}	VALUE OF PARCEL
EVERY ADDITIONAL 1 lb $1½^{D}$	£1 WITHOUT FEE
PARCEL MUST NOT	£5 FEE 1^{D}
EXCEED 11 lbs	£10 " 2^{D}

The weights are two 2 lb, two 1 lb, three 8 oz, one 4 oz and one 2 oz.

Jan Berning Collection.

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ISASC
INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

EQUILIBRIUM is published quarterly in February, May, August and November.

© 2012 International Society of Antique Scale Collectors

ISSN: 0893-2883

International Society of Antique Scale Collectors
Founded September 1976
Internal Revenue Service 501 (c) (3) FIN 36-2976411

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Published with the co-operation and support of
ISASC Europe
Founded October 1993

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Photos are best in 300 DPI Jpegs in a separate file with a maximum of 3 photos per Email.

Hooper's Official Post Office Scale?

BY ANDREW CRAWFORTH with DIANA CRAWFORTH-HITCHINS

What will turn up next?

I went to an Antique Fair, mainly to see dealers who keep items for me. One dealer said he had nothing to interest me this time, then he hesitated and said that there was one item that had come from a contact, brought in with some scrap brass. He hadn't had time to price it, so he asked me to go away while he discussed it with his mate. I returned and was stunned to see a pristine Henry Hooper bismar[1] with its table clamp. Figures 1 & 2. Of course, I'd seen drawings of one, but I'd never handled one before. The price was appropriate for a Henry Hooper, and I was happy to pay him.

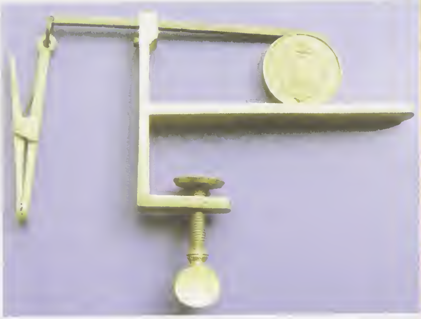


Figure 1. The latest find by Henry Hooper, with matt gilt and burnished gilt highlights, and a strong clip to hold the letter. 4 ins (100mm) tall and 5¾ ins (140mm) across.

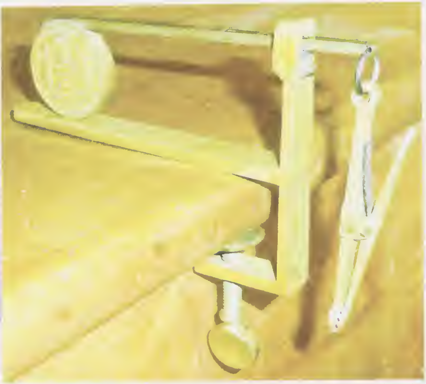


Figure 2. The clamp was very well designed, so that even when the bismar was used to weigh a 4 oz packet, it would not fall off the table. Presumably a packet, bound with string, had to be hooked over the outer handle of the clip. A stop was hidden in the top of the vertical support to prevent the beam from tipping more than a few degrees below the horizontal. The beam dropped onto the knife-edge at each graduation because the beam has fine grooves cut under each graduation point.

I took it to my mother, who was delighted, as she also had never handled one. We checked the Design Registrations to see whether Hooper had registered this version, but he had not. Figure 3. Why would anybody wish to buy such a small letter scale with such a sturdy clamp? Perhaps somebody wanted it to be available at all times, so had it clamped to one side of their desk or counter in either house or office. It certainly was not a scale to tuck into a pocket, but as this was one of the first ever scales made specifically to weigh letters, where would it be used?

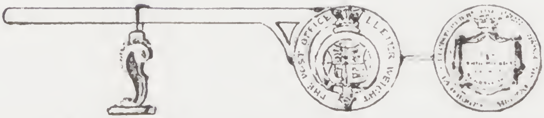


Figure 3. Design Registration number 1. Hooper's original design, registered on 12th August 1839. He knew exactly what the medallion should look like, but he had not, apparently decided how to attach the letter. The little pillar has the head of a bird curled round so that its beak is pressed into its neck, a design never seen. The beam shows a bracket attachment that would have needed to be soldered to the medallion, which would not allow precise weighing. The final version was riveted to the medallion.

It seems possible that this bismar was intended to fulfil an official contract for the Post Office, as it says on the medallion, "THE POST OFFICE LETTER WEIGHT", ('weight' being

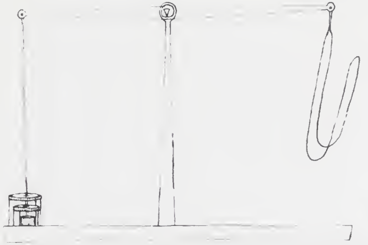


Figure 4a. Design Registration number 109, of 25th November, 1839 for a Post Office Letter Weigher. It seems extraordinary that Sir Edmund Beckett Denison, known as an architect, could do such a weak drawing. This was the first known idea for a wire letter holder, a practical solution that was subsequently much copied.

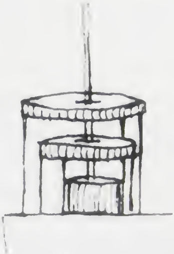


Figure 4b. The Registration has no text to explain how these poises were made or worked. Probably the smallest poise weighed ½ oz, and if lifted free of the base, indicated that the rate to be paid was over the bottom rate. If the inner poise was pulled up to 'capture' the next disc up, together they would indicate a letter was over 1 oz. A 2 oz letter would pull up both poises, and in combination with the top disc, would indicate that the user should pay over the 2 oz rate. This suggests that the upper poises had legs or glass tubes beneath them, so that the user could see whether the smallest disc had risen and captured the one above. Having other examples of disc lifting poises, my mother was very dubious about its usefulness. Unless the poises are at eye-level, it is extremely difficult to see what is happening even in sunlight, so how could a user see in an inner office, by candlelight?

a word occasionally used to mean 'scale'). Both Henry Hooper and his contemporary Edmund Beckett Denison[2] used the words "Post Office Letter" on their Design Registrations, suggesting that they were vying in competition to supply the Post Office. Figures 4a & 4b.

Edmund Hill, brother of Rowland Hill[3], invented a scale specifically for weighing letters that was shown to the Chancellor of the Exchequer at the Treasury in October 1839 and subsequently to officials at the Post Office and to Mary DeGrave.[4] The DeGraves raised objections to it, but what those objections were, we do not know. Rowland Hill did get permission to have 30-40 of his brother's design made up.[5]

By November 1839 DeGraves had agreed to make Edmund Hill's scales but the only tangible evidence of their manufacture was the payment of a bill to Mary DeGrave & Son for 11 sets of scales and weights for £3.5s per set. They must have been huge or difficult to make at that price, (unless DeGraves were making sure that Hill's design would seem to the Treasury to be out of the question because of its high price. We know that DeGraves did get a contract by 1851, as they were supplying their ladder scales to the Post Office. How much would each ladder scale cost? Less than £3.5s?)

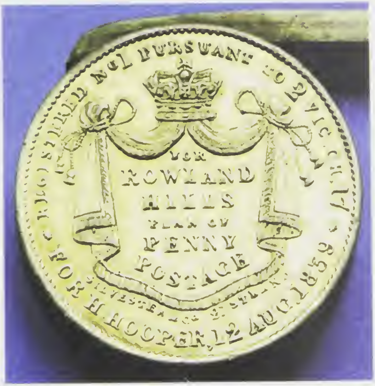


Figure 5. Close-up of the medallion, showing the Queen's Coat of Arms. The implication is that the scale had official blessing, but when Hooper designed this in August, no decision had been made by the Treasury as to what scales would be used in the Post Offices. Below the bottom of the fringe of the banner "SILVESTER & CO, 27 STRAND" is just visible. The Queen's crown is another attempt to give the bismar official status.

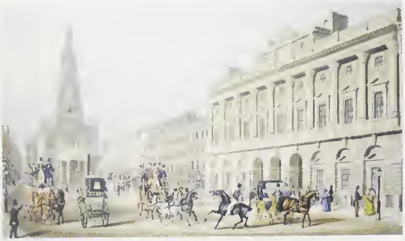


Figure 6. This watercolour must have been done from the doorway of Hooper's shop in the Strand. He could see Somerset Place on the right, and the Church of St Martin's in the Field on the left.

The new "Penny Post" was anticipated by Henry Hooper by three months.[6] Hooper designed his bismar to show from ½ oz to 4 oz, and registered it on the 12th August 1839, as the very first Design Registration. He was, in effect, getting three year's protection for his design before he did any marketing. As several of these medallions have turned up (often cut off the beam) we assume that Hooper's scale was popular, and that he sold a number of them before other designs came on the market. Figure 5.

The Design Registration papers gave us another way to find out about Henry Hooper. They gave his address as 13 Pall Mall East, so my mother was able to search London newspapers to discover what he did and when. From 1828 until 1842 he ran a publishing company specialising in pamphlets, newspapers and magazines, running the organisation from his home[7] and office at 13 Pall Mall East, called in 1828 "The Office of The London Magazine", later "The Office for Advertisement" and eventually "The Postal Depot". He sometimes published jointly with the prestigious publishers A & C Black of Edinburgh and he expanded his business to a second premises at the Corner of Catherine Street with the Strand (opposite the huge building, Somerset Place, later called Somerset House). This was the shop from which he sold his publications, all with an educational bias, and almost all very low in price (between three pence and one shilling). Figure 6.

In Hooper's early life publishers could be imprisoned for disseminating anti-government material. The press was less censored by 1828, so Henry Hooper was able to publish pamphlets about the Corn Laws, The Poor in Ireland, "An Examination of the Origin, Progress & Tendency of the Commercial of the Political Confederation against England & France", "Magistracy of England, its Abuses & Their Remedy", Distress in Manchester, and other such contentious issues of a political nature.

Amongst all the hundreds of advertisements he put into The Examiner and the London Standard, we expected to find advertisements for his postal scales after 1839, but found none. We did find a possible reason for his interest in Rowland Hill, as in 1838, he had published "Facts and Reasons in Support of Mr Rowland Hill's Plan for a Universal Penny Postage" by W H Ashurst, and Hooper became known as a Postal Reformer.

Hooper found a good medallist to make the poises for his bismars just along the Strand from his shop. Silvester & Co, 27 Strand, were goldsmiths and engravers of seals and copper plates, working between 1804 and 1843.[8]

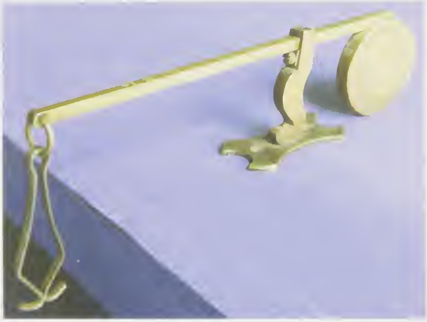


Figure 7. The patinated version we previously knew, with a simple little pillar. It is not as elaborate as the version shown in the Design Registration, so conceivably there is a more elaborate pillar waiting to be found. It has the cheap, simple clip. It could be screwed to a table, using the holes in the base plate.

We were getting some idea of Henry Hooper as a man, and we were impressed by his taking advantage of the entirely new Design Registration process on its very first day, thus getting Design Registration number 1. He obviously had an eye for new opportunities, and was not afraid to be adventurous.

So how many variations did Hooper invent and sell? The drawing on the first registration showed a rococo

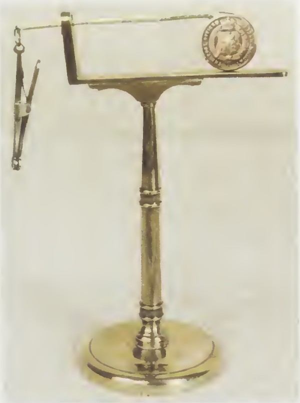


Figure 8a. The most expensive version, with a brass clip, a medallion and a parcel-gilt pillar. The fulcrum support was an adaptation of the clamp version.

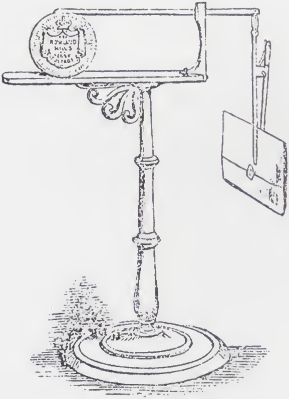


Figure 8b. The *Mechanics' Magazine* of 1840 gave the Hooper Registration a good write-up, but made the mistake of saying that in use, the result of having a moving fulcrum was no different from having a moving poise. The writer had not understood that the graduations on a steelyard were equally spaced, whereas on a bismar, the lowest graduations were widely spaced and got closer together as the weight increased. This was an advantage when the lightest loads needed precise weighing, as with a postal scale, but was a grave disadvantage if the expected load was heavier and thus graduated towards the tip of the beam. Note the curled brackets supporting the rest, a feature not seen on surviving examples. The letter was sealed with a blob of sealing wax, impressed with a wet seal, as envelopes had not been invented in 1840.

pillar and beam bifurcated where it was soldered to the medallion. However the known examples were made with a simple pillar and a straight beam riveted onto the medallion. Both bronzed and gilt versions were made. This design (of a beam with medallion fixed to it) came in three variations, those with a tiny pillar, (Figure 7) those with a clamp (Figure 1 & 2) and those with a tall pillar on a circular base (Figure 8a & 8b). These were supplied with a steel spring bent round to form a simple clip with a curly end to hook into the string of a little package, or with a robust brass clip held shut by a flat spring.

His second idea was for a cheaper, lighter pocket bismar, registered in October 1839 as number 68, still before the beginning of the Penny Post, so he was still mulling over ways to sell simple scales intended just for weighing letters. Figure 9. Previously most scales had been "general-purpose" and had needed to be bigger and more robust, except for those intended only to weigh coins or diamonds.

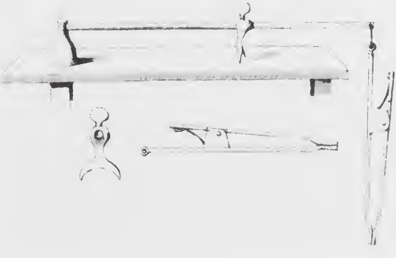


Figure 9. Design Registration no. 68 was taken out in October 1839, the second scale to be registered, other items being registered between number 1 and number 68. When the screw was fastened, the whole structure rocked on the two little pins, with only the letter clip having a proper bearing (formed by a split-ring). The spring in the heavy brass clip shows clearly as a curved insert.

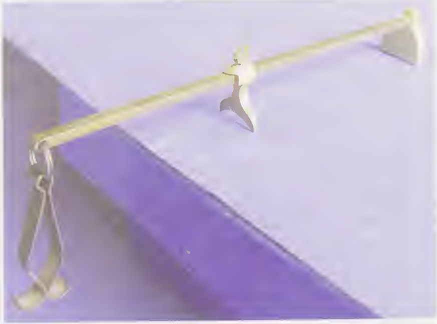


Figure 10. The graduations were defined by fine cuts in the top of the beam, for ½ oz, 1 oz and 2 oz only. The beam was for a smaller load so was only half as thick as the beam on the medallion version.

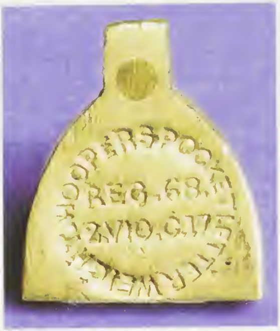


Figure 11. The cast-brass poise was crudely stamped, meaning that it could be sold for a much lower price than the medallion version. Hooper still referred to the Act of Parliament, but it lacked that official, dignified appearance!

The design shown in the second registration was for a simple pocket bismar, also called in the text "The Post Office Letter Weight" with a bag-shaped cast-brass poise. Figure 10. The actual bismar had a poise of the same profile as the bag, but flat, not round. It was stamped "HOOPERS POCKET LETTER WEIGHT, REG 68 2 VIC c17".[9] Figure 11. The term 'pocket' is absolutely appropriate for this tiny, light scale.

We have not seen this second registered design supplied with the heavy brass clip that would need a heavy poise to balance it. We have seen them only with the fine steel clips with curly ends, that did the job of holding a letter perfectly adequately. Even after inventing all these variations, Hooper was not satisfied. He produced a modification without a screw to fix the fulcrum temporarily, but instead made a little crescent-shaped saddle with a tiny spring under the beam, so that the fulcrum had to be pushed along the beam with the thumb. Figure 12. The screw version was graduated from ½ oz to 2 oz and the thumb version graduated from ¼ oz to 2 oz. There was no ¼ oz rate until long after the death of Henry Hooper, so this variation is a puzzle.

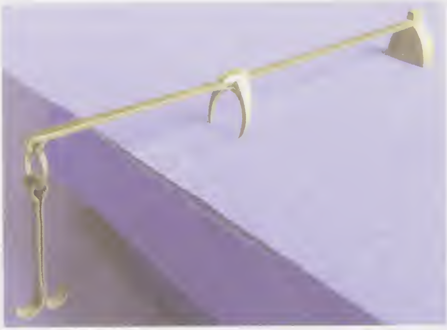
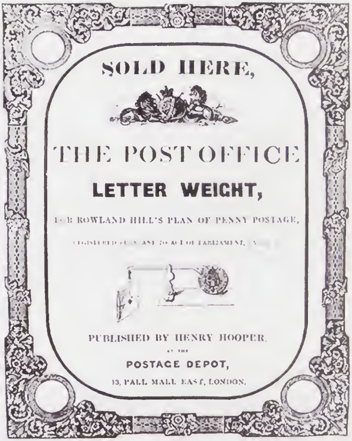


Figure 12. The flimsiest version of all, but adequate to weigh a letter of 2 oz. What the ¼ oz graduation was for, we do not know. As with the version in figure 10, the whole piece rocked on the fine pins. The clip used the minimum of metal.

Douglas Muir[5] found some prices for Henry Hooper's scales that show just how competitive were Hooper's prices, compared with the £3.5s price charged by Mary DeGrave for Edmund Hill's design. Which version, (medallion or flat poise), we cannot determine, although it was probably the medallion version. Hooper charged 3/6 for one with a steel clip, 4/6 for one with the big brass clip, 8/- for one with brass clip and a clamp, and 10/6 for one on a tall pillar. That made the cheapest one about one twentieth the price of Edmund Hill's scales made by DeGraves. If only we knew what Hill's design was!

Figure 13. The handbill for the medallion version, perhaps intended for pasting up in shops where it was retailed.



SOLD HERE,

THE POST OFFICE

LETTER WEIGHT,

FOR ROWLAND HILL'S PLAN OF PENNY POSTAGE,

REGISTERED PURSUANT TO ACT OF PARLIAMENT, [illegible]

PUBLISHED BY HENRY HOOPER,

AT THE

POSTAGE DEPOT,

13, PALL MALL EAST, LONDON.

Having been unable to find advertisements for Henry Hooper's bismars, we studied the one hand-bill that my father had found, saying "SOLD HERE". Figure 13. In tiny writing it said "13 PALL MALL EAST", but not in large enough letters to suggest that people had to go to his office to obtain them. Could this sheet have been printed for his retailers to put in their shop windows once the Penny Post system was operating? It was large enough to attract customers when they might not have noticed the little bismar itself. Hooper used as many trigger words as he could - Post Office, Rowland Hill, Penny Postage, Pursuant to the Act, Postage Depot, all words that implied official authorisation! Clever Henry Hooper!

The drawing shown on the Hand-bill showed the base at right-angles to the beam, so that it could be screwed to the bar between two Postal Clerk's desks. Figure 14. A later example of this way of giving two GPO clerks access to one scale was made (possibly by DeGraves) as a simplification of the ladder scales.

There is still the medallion version with the fixed fulcrum (mentioned in Design Registration no. 1) and the bismar with the bag-shaped poise (shown in the Design Registration no 68) that we have never seen, but who is to say that we'll never find either? Maybe one will turn up with another batch of scrap brass!

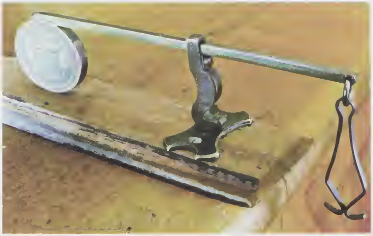


Figure 14. This version was for use in the GPO, or in offices, as it was only stable when screwed down. The GPO put a bar between two clerks, with a scale between them.

Notes & References

1. A bismar is a scale in the steelyard group, but instead of having a loose poise that moves along the beam, it has a fixed poise and a fixed load position, and a moving beam, that has to be slipped through the fulcrum until balance is achieved.

2. Sir Edmund Beckett Denison later became the 1st Baron Grimthorpe (1816-1905). He was a lawyer, horologist and architect. He designed the mechanism for the clock at the Palace of Westminster and its chimes, colloquially called Big Ben. "To grimthorpe" came to mean "to carry out unsympathetic restoration of ancient buildings".

3. Rowland Hill proposed a reformation of the Post Office, as letters were so costly to send more than a few miles. He was known to every reader of newspapers, and caused a great stir because he anticipated a huge rise in the numbers of letters sent if the price came down and was uniform, regardless of distance.

4. Mary DeGrave & Co were accustomed to supplying government departments with scales. As their premises were only about

twenty yards from the main building of the General Post Office in St Martins Le Grand, naturally they took an interest in the forthcoming need for each Post Office to have letter scales.

5. Muir, D N, *Postal Reform & the Penny Black*, pub National Postal Museum, London, 1990.

6. Parliament dithered for years while arguments raged about whether a penny rate would lead to a massive increase in the number of letters sent, or would bankrupt the Postal Service. They passed the Act on the 17th August 1839, and decreed that the Penny Post should start in December 1839, with a flat rate of four pence for every half-ounce of letter. There was a huge outcry, with the public feeling cheated of their expectation of a penny rate. Parliament reacted rapidly, and altered the rate to one penny for every half-ounce on January 10th 1840.

7. We knew it was Hooper's home because there was a report in The Examiner of 10th March 1839, that Mrs Henry Hooper of 13 Pall Mall East, was delivered of two boys.

8. Richard William Silvester & Co were goldsmiths but specialised in engraving shipping tokens, Masonic medals, dies for bank notes and medallions. Their premises were demolished to make way for Charing Cross Station. Silvester was one of the proprietors of the Gaslight & Coke Co, standing for the office of Auditor in 1819, and was made a Director in 1838. He was also a steward of Queen Charlotte's Lying-in Hospital in 1838. As he apparently ceased trading in 1843, it is reasonable to conclude that Hooper's medallions were all made between 1839 and 1843.

9. The 2 Vic c17 referring to the Act of Parliament promulgated in the second year of the reign of Queen Victoria, and the 17th Act of that year

Acknowledgements

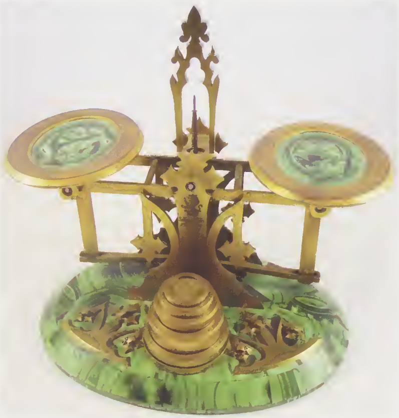
Thanks to Bob Jibben, Howard & Frances Simmons, Brian Brass, Fletcher Wallis and the late Bob Stein.

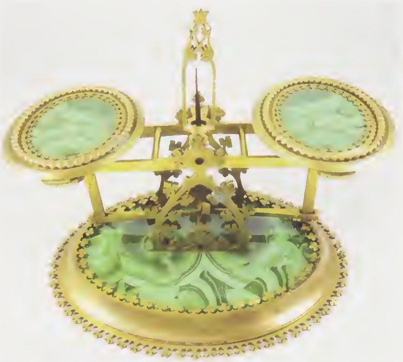
Showcase

The Mordan scales shown here are all embellished with Malachite, a very popular semi-precious Stone. Its banded light and dark green designs are one-of-a-kind, and give it a unique ornamental quality unlike that of any other stone.

The scale below was presented to Sarah Merry on 11th Nov. 1883 and measures 7½" by 4¾" and is 7¼" tall.

Mary Ann Murphy Collection.



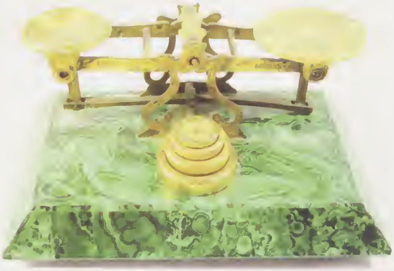


The scale above is marked by the retailer Leuchars 38 Picadilly. Its ornate oval base measures 7³/₈" by 5½".

Larry Press Collection.

The highly engraved and gilded scale at right is marked S. Mordan & Co. London. Its rectangular base measures 7¾" by 5".

Larry Press Collection.



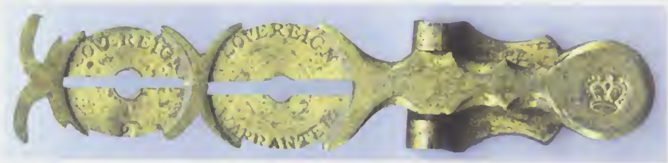
‘B. Cattle’ and ‘Cattle’s Patent’ Sovereign Rockers – Update

BY MICHAEL FOSTER

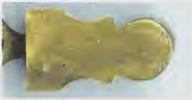
As previously stated in Equilibrium, the author believes that most sovereign rockers without a ‘Name’ stamp were made for sale by Retailers and the only Maker identification used on the rocker was the Crown stamp.

My article on ‘B. CATTLE’ and ‘CATTLE’S PATENT’ Sovereign Rockers covers a variety of Bennett Cattle’s Named rockers and some of his design innovations, see Equilibrium, Issue No. 3, 2012, pp.3845-51.

I was recently reviewing scanned images of rockers that I had received from Graham Weeks of the UK over a year ago and noticed an “Unnamed” B. Cattle rocker with his maker mark crown stamp, D7.



Unnamed rocker with B. Cattle maker mark crown



The lack of his name stamp on one of his rockers is uncommon for Bennett Cattle. In addition his crown mark and the platter labelling are upside-down from normal.

Upside-down or side-ways crown stamps are not unusual. These ‘Friday afternoon or Monday morning’ specials are probably due to poor quality control and/or an apprentice ‘striker’. However, when all of the labelling is upside down it looks more like it was intended to be that way. For what reason becomes the question?

Was it made for left-handed users? While today the “lefty” or “southpaw” is accepted by society, in 19th century England being left-handed was considered “sinister” from the Latin sinistra originally meaning “left” but the word had taken on meanings of “evil” or “unlucky”. Children were taught to use the “right” hand exclusively. This practice persisted up to about 1940. It is unlikely that the rocker was labelled for the left-handed user.

Perhaps it was made for an amputee. Horatio Nelson, 1st Viscount Nelson, 1st Duke of Bronté is an example of a famous right-arm amputee of the Napoleonic Wars. Although Lord Nelson died on 21 October 1805 at the age of 47, at Cape Trafalgar, Spain, many amputees survived and were living in England after the end of the Napoleonic Wars in 1815.

On the other hand it could just be an error by a left-handed striker. We will never know.

The blank beam of this rocker is a different shape from the ‘B. CATTLE’ rockers previously reported. The shape and dimensions of the base plate is unlike those found on other Cattle rockers and is currently unique in the author's database of base styles.

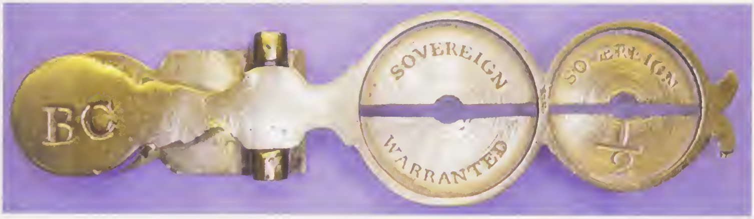
The decorative two-horn finial with base on the end of the beam is only found on some 'WT' stamped rockers with miniature crowns which were most likely produced by William Tabberer at about the same time period as Cattle's offering, 1828-30. Don't know which maker used the finial style first.

Was this a 'counterfeit' rocker made by someone other than B. Cattle using his maker mark? The crown stamp on the rocker is a high quality Cattle maker mark crown which a counterfeiter would not go to the trouble of duplicating. There was not enough money to be made selling a small number of counterfeit rockers.

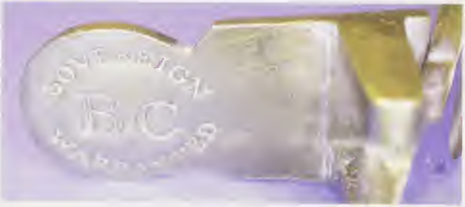
This rocker at the moment is the only known example which implies that most likely there were only a small number made, perhaps as a marketing trial by Cattle to differentiate his offerings or most likely for retailers who wanted a rocker without his name on it. It was quite common for makers to produce 'Unnamed' rockers for retailers with only the maker's crown stamp.

Based on the lack of his name stamp and the differences in rocker style, the author believes that this was made specifically for retail purposes to intentionally differentiate it from his named 'B. CATTLE' stamped rockers. This is the first example known to the author of Cattle making rockers for Retailers.

An alternate base labelling style has also come to light on the 'BC' on the poise rockers. This rocker predates the rocker shown in my article on p.3845 as it has 'SOVEREIGN BC WARRANTED' on the base instead of the 'B. CATTLE' stamp that was used on all later rockers, except those possibly made for retailers.



'BC' on the poise rocker



**'SOVEREIGN BC WARRANTED'
on the base**

Acknowledgements:

Special thanks to Graham Weeks for providing the rocker scans used in this work and Diana Crawforth-Hitchins and Graham for their comments and inputs.

Reference my Book: *Coin Scales: British Rockers and Their Markings.*

Book Review

Le Pesage Monétaire - Boîtes et Poids de France du XVIIe au XIXe siècle / Le pesage monétaire - Boîtes, poids, balances et pèse-monnaies en France, by Bernard Garault, Éditions les Chevau-Légers, Paris, July 2012. II + 172 + VI + 184 pp + XVI plates. Full color. Format ISO-A5 (14.8 x 21 cm) ISBN 978-2-916996-47-9. Available at the webshop of cgb.fr., price 27.55 Euros.

This book on French coin-weights and coin-scale boxes took a while to be published: it was completed on January 21, 2009, according to the title page. Text and pictures are somewhat small but very detailed.

The book consists of two parts:

(1) Garault's own book (II + 172 pp)

(2) a nice reprint of Adolphe Dieudonné's *Manuel des poids monétaires* from 1925 (184 pp + 16 plates), which is nowadays hard to find.

Part I starts with an introduction in French, English and German. It shows examples of coin-weights from Roman times and from the 14th century onwards in France; also pictures of beam scales on some coins and tokens. Then explanations of the typical series of marks on French coin-weights: their mass in 'deniers' and 'grains', the maker's mark and the verification stamp by the Mint. Then more about the contents of a coin-scale box; a listing of 35 different types of coins (and their subdivisions) for which coin-weights can be found in coin-scale boxes; the listing closes with 1 denier weights (1.27 g).

Then follows the main part of the book: coin-scale box production at Rouen, Paris, Limoges, Bordeaux and Lyon. Listings with names of makers, dates of production, addresses and marks, often rounded out with pictures of coin-scale boxes by said makers. The listing closes with data on the coin-scale boxes by dealer Courseul at Namen / Namur in Belgium. From the end of the 18th century, when the metric system came into existence, coin-scale boxes radically changed. No longer did they have separate weights for all different coins, but the user was presented a neat set of nested cups and grain weights, together with a table stating the mass of every coin. Gone were the times that each maker showed their name on the label.

The book closes with boxes crossing borders: a French box for Germany and an English and an Italian box destined for France. Also covered are the well-known Jecker folders (which he learned to make while working with Ramsden at London) which were also made by Jousserandot and Nerot. Lastly are rockers from the 1930s, when coin-checking returned for a short while, museums with interesting coin-scale box collections, price recommendations for coin-scale boxes and a short bibliography.

France is a large country and the variety in coin-scale boxes is also immense. This book is a nice starting point and a welcome addition to the library of any coin-scale box collector.

RITZO HOLTMAN

Weighing at the Banks 6: Towards the New Millenium

BY NORMAN BIGGS

The growth in the circulation of notes

In 1971 the cash circulating in the UK amounted to just over £4 billion. By 1981 it had grown to £12 billion, and by the end of the century it had reached over £30 billion.[1] Most of this growth was in bank notes, with larger denominations being used much more frequently. The process of issuing notes from the banks was much improved by the introduction of the ATM (Automated Teller Machine, also known as the 'hole-in-the-wall').

The ATM was a counting machine, but there were many occasions when notes had to be checked by weighing. This explains the great profusion of weights for checking notes dating from the 1980s and 1990s, particularly the Omal types with plastic labels. The variety of types is attributable to several factors.

- There were two series of notes. The earlier weights (Figure 1) were intended for checking Series D notes (the pictorial series), but these were replaced by the slightly smaller Series E notes (the historical series) in the early 1990s. The different denominations were replaced at different times. The Omal weights for Series E notes used the word NEW (Figure 2).

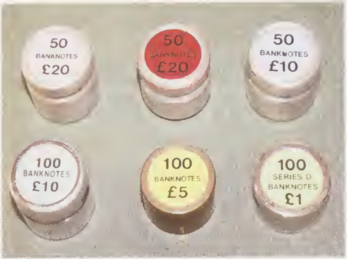


Figure 1. Some weights for checking Series D notes.

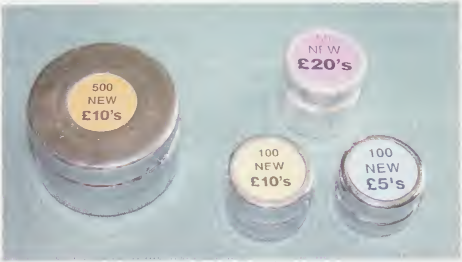


Figure 2. Weights for 'NEW' notes (Series E).

- Weights for checking four denominations of notes (£1, £5, £10, £20) were needed. The £1 note was withdrawn in 1988, and did not appear in Series E, being replaced by the £1 coin first issued in 1983. The £5, £10, and £20 denominations occurred in both series. Notes for £50 were issued from 1981 onwards, but as far as is known they were not checked by weighing.
- Special weights were used for 'sealed bags'. At one time bank clerks made up bags of notes by folding a sheet of paper around a pile of notes, and closing it with sealing wax. Later, plastic bags were used. These bags were sometimes checked with special weights labelled SEALED BAGS.

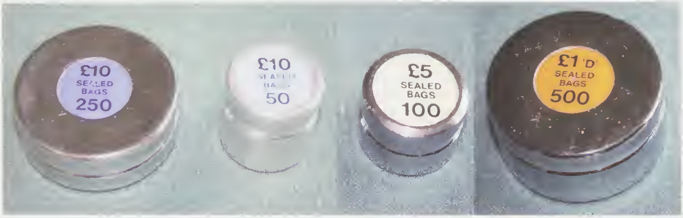


Figure 3. Four weights for sealed bags of Series D notes.

- There were two sizes of ‘bag’. The official Bank of England terminology for a specific number of notes was a packet, and five packets constituted a bundle. A ‘bag’ could correspond to either a packet or a bundle. At one time a packet of £1 or £5 notes contained 100, while for £10 or £20 notes the number was 50. To add to the confusion, the packet of £10 notes was changed to 100 during the Series D period.

The following table summarises the various types and the observed mass of some examples. Figures 1, 2 and 3 illustrate the three main groups. It is quite possible that other denominations will turn up.

Series	Denomination				
	£1	**£5**	**£10**		**£20**
	1978-88	1971-90	1975-91		1970-92
D	100 ~75g	100 ~94g	50 ~53g	100 ~106g	50 ~60g
D Sealed Bags	500 ~376g	100 ~96g	50 ~54g	250 ~272g	50 ~60g
E	---	1990-	1991-		1992-
		100 ~79g	100 ~95g	500 ~375g	50 ~52g

In addition to the chrome-plated Omal types, brass weights were also used for checking notes in the 1980s and 1990s. Some of them were made in the traditional shapes, such as hexagonal cylinders, but some were very simple. Figure 4 shows two simple examples, used for checking bags of sealed notes.

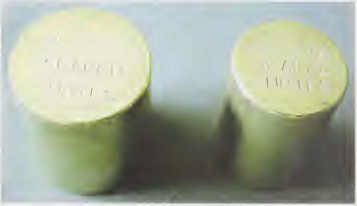


Figure 4. Two brass weights for checking sealed bags of notes.

Smaller decimal coins

It soon became clear that the decimal coins introduced in 1971 were over-sized in relation to their value, and they were eventually replaced by a series of smaller coins. The first to appear was a 7-sided 20p coin, introduced in 1982. It was followed by a round £1 coin in 1983, which replaced the old £1 note. The old cupro-nickel 5p and 10p coins were replaced by much smaller versions in 1990 and 1992 respectively. This left the original 50p coin as a significant anomaly, and it was eventually superseded by a smaller version (also 7-sided) in 1997. Finally, a bi-metal £2 coin was introduced in 1998. Weights for all these coins are known (Figures 5 and 6).

DESIGNATION	COINS	MASS	DATES
£10 x 20p	20p (7-sided)	250g	1982 onwards
£20 x £1	£1 coin	190g	1983 onwards
£5 new silver	5p, 10p (small)	183g	1990, 1992 onwards
£10 x new 50p	50p (7-sided, small)	160g	1997 onwards
£20 x £2	£2 coin (bi-metal)	120g	1998 onwards

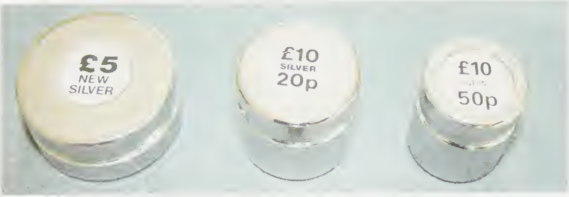
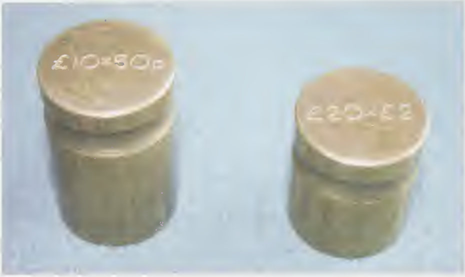


Figure 5. ◄◄ Omal weights with plastic labels for the smaller decimal coins.

Figure 6. ↙↙ Two brass weights from the late 1990s.



Conclusion

Among the weights shown in Figures 5 and 6 are examples intended for checking £10-worth of the new 50p coins introduced in 1997, and £20-worth of the £2 coins introduced in 1998. Clearly, some banks and businesses continued to weigh coins and notes in the traditional way, right up to the end of the 20th century. A version of the Salter Model 53 coin-checker (see Part 3) was still being advertised in 2012.[2] However, there were significant advances in technology from the mid-60s onwards. In all areas of application, mechanical weighing devices were gradually replaced by electronic load-cell machines, which do not require separate weights. For cash-handling operations, machines that can both sort and count coins were introduced in the 80s and 90s. Many such machines are now available (2012), and can be viewed on the websites of firms like Volumatic and Scan Coin.[3] Some of these machines incorporate electronic weighing devices.

In this series of articles we have seen many changes in the circulation of money over the past three centuries, reflected in the weights and scales used for checking coins and notes at the banks. There may well be further changes ahead: for instance, some people predict that cash will disappear altogether. Be that as it may, the production of interesting collectable items has probably ended!

References

1. Bank of England Statistical Interactive Database, series LPMAVAB. www.bankofengland.co.uk
2. Scale Sales website, www.scalesales.co.uk.
3. See www.volumatic.com, www.scancoin.co.uk.

The First Drum Computing Scale

BY BILL BERNING

En route to the annual ISASC convention in Pittsburgh this year, my wife and I decided to travel on a back road and check out antique shops on the way. We came upon a small antique mall in one town in Ohio, near the Pennsylvania state line, that was just about to open. After waiting a few minutes for the shop to open, and looking around most of the shop, Jan saw this strange shaped object in a glass case, noticed that it had lbs. and oz. marked on it and descreetly pointed it out to me. Since it was partially obscured by a letter folded across its middle, and it didn't look like anything we had ever seen, we asked the shopkeeper if we could look at it closer. Upon closer inspection we realized that it was indeed a scale and it looked like a computing scale, but what exactly had we found? We bought it and took it quickly to the car. The inscription on it read WM. H. PHINNEY PAWTUCKET, R. I., PAT'D AUG. 30, 1870 (Figure 1). Who was Phinney and what did we have? When we arrived at the hotel Jan went to the business center to attempt to find the patent and within ten minutes she returned to the room with the patent (Figure 2).

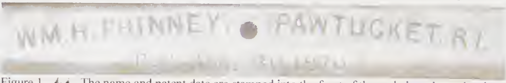


Figure 1. The name and patent date are stamped into the front of the scale just above the chart.

After looking at the patent and thinking about the odds of finding one of these 140-year-old scales in good condition, complete and working; I was amazed. After doing hours of research I can now share my findings.

William Henry Phinney was born October 1823, in Harwich, Massachusetts of old revolutionary stock. At an early age his family moved to Pawtucket, Rhode Island. As a 38-year-old carpenter he enlisted in Battery E, first Regiment, Rhode Island light artillery on August 14th, 1862, and was honorably discharged at the close of the war. He participated in at least 10 battles including Gettysburg, Pennsylvania where he was one of about half a dozen of his battery who survived. The only occupation he appears to have had throughout his life was as a carpenter. His Civil War records, the 1870 and 1900 U.S. Censuses and various city directories from 1871 to 1902 list him as a carpenter. His obituary describes him as *one of the best and most highly respected citizens of Pawtucket, a man of noble character upright and honest in all of his dealings and was esteemed by all of his many acquaintances.*

William H. Phinney appears to have led an average, ordinary life with the exception of his service in the war and his invention of the computing scale, for which he was issued patent number 106,869 on August 30, 1870. This scale was so advanced it would be decades before this type of scale would become the standard of the industry.

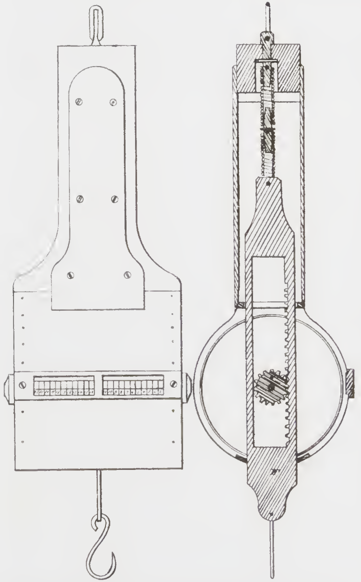


Figure 2. William H. Phinney patent of Aug. 30, 1870, incorporated a drum or barrel computing chart that rotated within a casing.

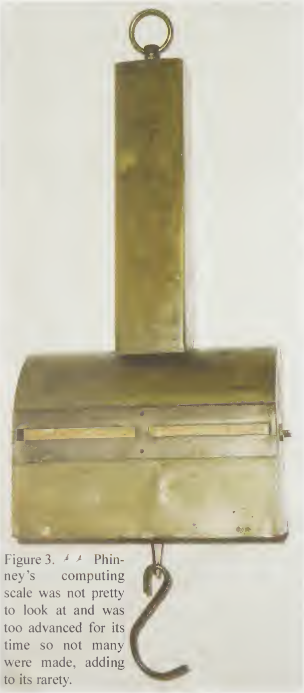


Figure 3. Phinney's computing scale was not pretty to look at and was too advanced for its time so not many were made, adding to its rarety.

The patent for Phinney's *Scales for Showing Weight and Price* describes the scale in part as follows: *A case as composed of a drum and a chambered arm extending upward from an opening into such drum. There are one or more slots made through the front of the drum there being a scale on the lower side of each slot. Within the drum there are two cylinders with a common shaft. A slotted bar moving vertically out of the bottom of the drum has a rack to engage with pinion. The bar depends from a helical spring. A hook applied to the lower part of the toothed bar serves to enable an article to be weighed and valued to be connected with the bar. The two cylinders are divided lengthwise on their peripheries by a series of lines, extending around them... The cylinders are also divided by a series of straight lines crossing the circles. The parallel straight lines mark the arcs of the revolution of the cylinders therefore we should number the said arcs ¼, ½, ¾ and so on. Thus it will be seen that, at a glance at the price on the scale, and at the number that on the drum may be next to the said price, we shall have the value of any articles suspended from the hook.*

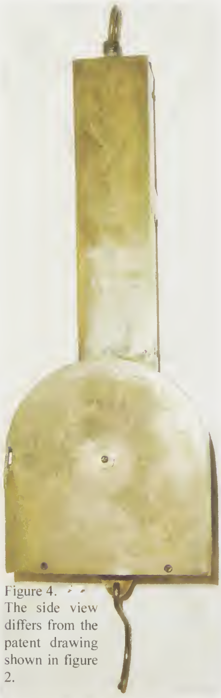


Figure 4. The side view differs from the patent drawing shown in figure 2.

This advanced scale, which indicated the total value of any commodity, without the need for math, was never a commercial success. Court records show (below) a total of probably just over 20 were ever manufactured. Presumably Mr. Phinney returned to the carpentry business for the remainder of his life.

In the 1905 edition of *Encyclopedia Americana*, under the heading Computing Scale one paragraph reads: *W. H. Phinney of Pawtucket, R. I. was one of the earliest inventors of scales of this class as shown by letters patent issued to him on 30 Aug. 1870. Scales of this type however, attained no prominence until the appearance of the more perfected form of this machine as invented by A. U. Smith, Seymour, Conn., to whom letters patent were issued on 3 Sept. 1895, since which time the scale has been extensively used in meat markets. The author of this section was Henry Theobald, treasurer and manager, Toledo Computing Scale Company, Toledo, Ohio.*

The May 10, 1917 Issue of *Scale Journal*, in an article titled *The History and Construction of Computing Scales* by Jacob Barr, special representative Standard Computing Scale Company, also realized the importance of Mr. Phinney's scale. It states *The birth of the computing scale happened on August 30, 1870, for on that day the United States Patent Office issued patent number 106,869 to William H. Phinney of Pawtucket, Rhode Island, for a new and useful apparatus for determining weight and value of articles. The Phinney scale was put into actual use but its beautiful truth and great value was not appreciated 47 years ago - he was ahead of the times.*

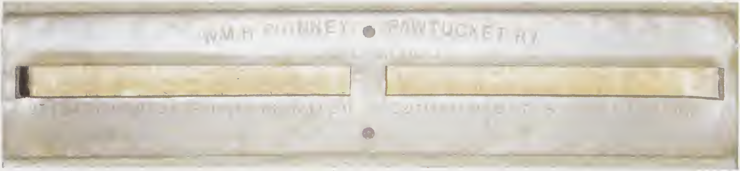


Figure 5. ↗↗ The dial of Phinney's computing scale is made from paper with multiple numerals on it to compute the cost of goods based on their weight. The scale capacity is 14 pounds by 2 ounces with a maximum cost of 25 cents per pound.

On August 16, 1902, Mr. Phinney died without ever realizing what his invention would do to change commerce. William Henry Phinney might have gone on to become the proverbial footnote in history, had it not been for the lawsuits 30 years later. These lawsuits did not directly involve the Phinney scale but it played a major role in the outcome of these trials.

These were major trials that lingered for years. The following are excerpts from various trial decisions pertaining to the Phinney scale and all of these cases involve patent infringement.

November 22, 1905:
Court of Appeals of the District of Columbia. Computing Scale Company of America v. The Automatic Scale Company. Case Number (119 O.G., 1586).

This suit was brought for the alleged infringement of Letters Patent No. 700,919 issued May 27, 1902, to the appellant, as assignee of Austin B. Hayden, for alleged improvements in computing-scales. The invention relates particularly to computing-scales of the spring-balance type, and its made object, as stated is to increase the computing capacity of scales of this type. It may be said that a computing-scale is a device which enables the price of the article weighed thereon to be at once read upon the scales, thus avoiding the necessity of mathematical calculation upon the part of the operator.

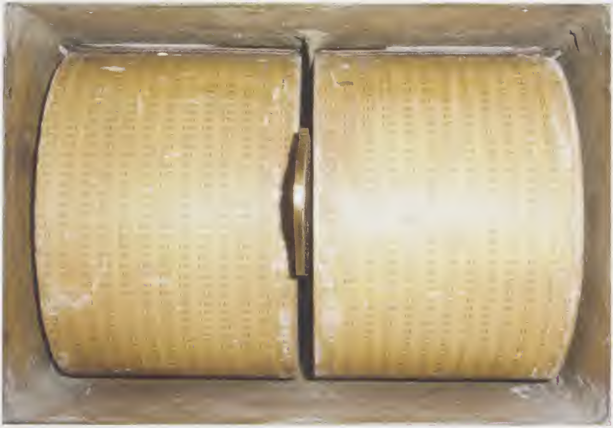


Figure 6. ↖↖ Phinney's chart is a double drum on two wooden spools. The computing values printed on the chart are in line with the weight indicated for even ounces which are shown in the column on the far right and pounds which are in the second column from the right. The remaining columns do the multiplying to get the full price of the goods for the merchant. Unlike more modern computing scales, Phinney's did not have a viewing window for the customer.

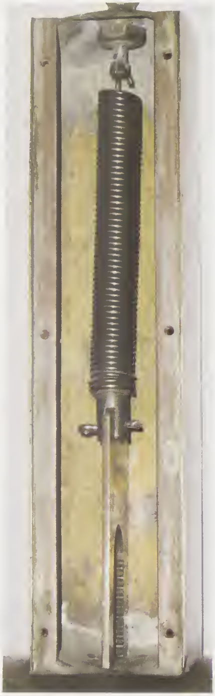


Figure 7. The scale has an adjustment screw that connects to the ring on top allowing the user to adjust the scale as the helical spring wears or for a tare. The rack that can be seen here, at bottom, turns the pinion, inside the scale which rotates the computing drum or barrel of the scale. All parts are brass except the spring which is made of steel.

The art in question was quite fully developed at the time when Hayden filed the application upon which the patent in suit issued. The record discloses one patent issued some 50 years ago, and it may be as urged, that its device was not a commercial success, although the record is silent as to this. Like many other inventions it very likely was born out of due season, and long before the demands of trade led to a commercial demand for computing-scales.

The limitations arising out of the prior art, if any, will be found in the following patents, Phinney, No. 106, 869, August 30, 1870...

January 23, 1907:

United States Supreme Court. Computing Scale Company of America v. The Automatic Scale Company. Case Number (204 U.S. 609). Argued January 23, 1907. Decided February 25, 1907:

An examination of the record discloses that computing scales have been the subject of prior inventions and were well known at the time of Hayden's application. It is true that the scales disclosed in the prior art were generally those having a horizontal axis, case, and cylinder, although it was not new to arrange a scale vertically.

If we are to read the claims as broadly as is contended for, and omit, for the present, vertical construction shown by Hayden, we shall find in the patent of Phinney, No. 106,869, of August 30, 1870, a computing scale having the general elements of a non-rotatable casing, provided with a price index and rotatable cylinder journaled in the case, and having computations thereon, a suspended, spring-supported, load-bearing, and cylinder-revolving rod, and connecting means between the rod and computing cylinder, to impart rotary motion to the inner cylinder.

April 15, 1913:

United States Circuit Court of Appeals. Toledo Computing Scale Company v. Computing Scale Company. Case Number (208 Fed., 410).

BAKER, Circuit Judge. In this record the greatest thing is the fact that Smith put in the hands of the world's vendors of commodities the first usable automatic computing scale. Long before Smith's time, and the length of the interval is a fact of considerable weight, the paper art (Phinney's patent,106,869, in 1870, and Babcock's, 421,805, in 1890) had professed to teach practical scale-makers how to build automatic computing scales. But when those disclosures were given material bodies, failure was the result. Just as Smith said in his specification, they would not work twice alike, they were not reliable. To-day in the light of what Smith accomplished it may be easy enough to see exactly where the difficulty lay; but this record proves that during the long interval between Phinney and Smith some of the brightest and most skillful men in the scale business, realizing what a tremendous commercial success was awaiting a reliable automatic computing scale, did not draw from Phinney's patent, nor from elsewhere in the prior art, nor from their own experience as practical mechanics, nor from their own ingenuity, any conception of the necessary means.

March 25, 1922:

Court of Appeals of the District of Columbia. Toledo Scale Company v. Computing Scale Company. Case number (2784).

In answering the bill in this suit Toledo Company averred anticipation by reason of earlier patents, among them patent 106,869 granted to William H. Phinney in 1870, and further of averred anticipation by reason of prior public use and sale "by various persons at various places within the United States, and among others at Pawtucket R.I. by William H. Phinney, then and now, as defendant is informed and believes, residing at said Pawtucket."

Toledo Company introduced many prior patents and a large amount of evidence relating to alleged prior uses and sales, but none relating to the alleged prior use and sale by Phinney at Pawtucket. By its degree of June, 1912, sustaining validity and finding infringement, the court below necessarily decided that Phinney had neither used nor sold anything that could impair the patent.

In 1901 Computing Company brought suit in the Eastern District of Pennsylvania to enjoin Federal Company from infringing this patent. Federal Company took depositions relating to the Phinney commercial practice and introduced three Phinney scales in evidence. By stipulation each side retained possession of its own proofs and exhibits. The Phinney exhibits were later turned over by Federal Company's counsel to Computing Company's counsel who had them in possession until after the court below in this suit had tried and decided the issue of validity. Finally the Federal case was dismissed because, as Toledo Company alleges, Computing Company was advised by its then counsel that the Phinney practice was a dangerous defense and would probably defeat the suit.

After 1906 and before the court below decided the issue of validity Computing Company secretly purchased and took into its possession all the Phinney scales it could get, being all of the 20 scales Phinney ever made except one or two then in the hands of users, and except those in possession or control of defendants in the Federal, Randall, and Standard suits. Such purchases were made by Computing Company "in pursuance of said conspiracy," "secretly," and "fraudulently," for the purpose of preventing Toledo Company and the court below and this court from learning of the Phinney commercial practice.

Toledo Company made diligent investigations to find the Phinney commercial practice and Computing Company's fraudulent suppression of evidence thereof (but never went to Pawtucket until after the trial in June, 1912). While Toledo Company has had knowledge of the Phinney commercial practice since 1912, it had no knowledge of Computing Company's fraudulent suppression of evidence thereof until December 20, 1921, which was after the affirmance of the accounting decree. And so Toledo Company has never had the opportunity to present to any court the true facts with respect to the Phinney sale and use, and has no hearing on Computing Company's fraudulent conduct.

Toledo Company as an affirmative defense alleged prior sale and use by Phinney at Pawtucket, R.I. Issue was joined by a reply in denial. When the case was called for final hearing on the issues of validity and infringement, both parties responded that they were fully prepared for trial. An actual adversary trial was had. It was hotly contested. There was a voluminous record on the merits of the patent. On that record the court below adjudged validity and infringement. In Toledo Company's Ohio bill and its response here, fraud on the part of Computing Company is alleged. Those allegations we accept at face value, though flatly denied by Computing Company. (But we passed the adjectival, adverbial and collateral denunciations and regard only the substantive acts.) Before, at the time of, and during the trial, Computing Company by reason of the Federal, Randall, and Standard suits, and by reason of its investigations and purchases at Pawtucket, had full knowledge of the alleged Phinney commercial practice. Toledo Company, as Computing Company could see and know during the trial, had no such knowledge. Nevertheless Computing Company permitted the hearing of evidence to be closed without informing Toledo Company and the trial court that there were witnesses who *could testify and exhibits at Pawtucket and elsewhere (some in its own factory) which could be introduced in evidence as to the bearing of the old Phinney scales upon the validity of Computing Company's patent.*

During Toledo Company's challenged infringement for six years preceding the trial in June, 1912, any investigation in and about Pawtucket and in the offices of clerks and counsel where other makers of automatic computing scales were suable on Computing Company's patent, would have brought forth even more of the Phinney scales.

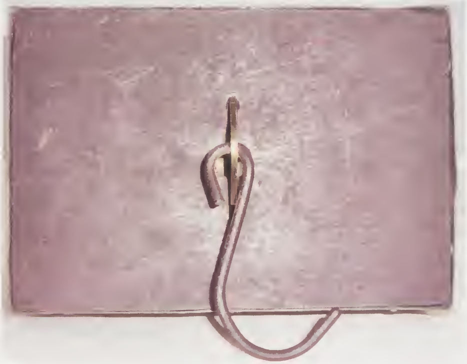
"From the 1913 affidavit of Thomas Phinney, son of the grantee of the Phinney patent of 1870 and successor to his father's business:" The three scales I before mentioned as having been assembled by me out of parts turned over to me by my father were sold one at a time to the same individual, whose identity I do not know. Some 15 years ago he first applied for a scale representing to me that he was from Connecticut, and desired the scale for the use of the Grocer's and Butcher's Association of Connecticut. About a year later he appeared again and I sold him a second scale of this same kind. Upon this occasion I asked him if he hadn't taken the first scale up to Boston used it in connection with the business of the Boston Computing Scale Company. He admitted that he had some connection with that company, but stated that he was out of it, and wanted another scale to use in some other connection. I sold him one and he returned again about a year later and I sold him a third scale... I have recently made repeated efforts to locate one of the scales which were put in regular use at places of business where my father sold them, but I have been unable to locate a single one of them. I believe they were all gathered up some 10 years ago in connection with the same litigation with reference to which I loaned Mr. Howson my scale.

April 9, 1923:

Court of Appeals of the District of Columbia. Toledo Scale Company v. Computing Scale Company, Fidelity and Deposit Company of Maryland et al. v. Computing Scale Company et al. (261 U.S. 399, 43 S. Ct. 458, 67 L.Ed. 719). Argued March 16, 1923. Decided April 9, 1923.

On the trial, the Toledo Company's expert testified that he had built a Phinney scale following the patent to Phinney, but that he could not get it to stop twice within an ounce of the same weight, and that a scale which would not weigh within a very small fraction of an ounce was not an instrument of precision and not a commercial article at all. It should be said that the specifications of the Phinney patent made no reference to the material of which the cylinder of the scales was to be made or its weight, or the importance of those features.

Figure 8. The bottom of the scale is made from fine mahogany giving the idea that Phinney wanted a fine instrument utilizing the best materials. It measures 7¼" by 5".



On May 14, 1913, the Toledo Company made a motion in the Circuit Court of Appeals that the court include in its mandate, affirming the decree of the District Court for an accounting leave to rehear the cause and to permit the Toledo Company to introduce proof that computing scales had been made and sold and introduced into use by the patentee Phinney of Pawtucket R.I., which had a cylinder drum of light wood skeleton covered with thin paper and anticipated the drum of Smith. Three Phinney scales and 13 supporting affidavits were introduced. These included one of the son of Phinney, the patentee, who had been with his father during his manufacture and sale of the *scales until his death and who still lived at Pawtucket, of Phinney's widow, and also those of residents of Pawtucket who said they had bought and used the scales. The affidavits also disclosed that in a suit against the Federal Company for infringement of the Smith patent brought by the Computing Scale Company in Philadelphia, which never came to trial, all this evidence had been taken and was on file. The three Phinney scales which were exhibits there had been in the custody of Church and Church who had been counsel for the Computing Scale Company in Philadelphia. It was also shown that the Computing Scale Company had three or four of these scales and drums in their possession at Dayton. It also appeared from young Phinney's affidavit that the Boston Computing Company, which owned the Smith patent and which subsequently was bought out by the complainant Computing Scale Company, was trying to buy the scales which Phinney had. The evidence tended to show that only 20 scales had been made by Phinney and that no scales were made after 1895.*

The Toledo Company had a chance to make a defense of the Phinney prior use and failed to do so because of its own lack of diligence as it did not secure a hearing of the Phinney defense, its opponent had no chance to meet it, as possibly it might have done by showing that the use relied on was a futile one because the Phinney scale as made was not practical, or did not weigh accurately, or accomplish the purpose of the Smith patent. The fact that but 20 machines were made, and that these ceased to be used years ago or were destroyed, suggests the probability of such an answer.

The main scale housing is made entirely of brass with the base of the drum made of mahogany. It measures about 7¼ inches wide and 14½ inches high not including the hook and the ring. It has capacity of 14 pounds graduated by 2 ounce increments and computes the price per pound from 2¢ to 25¢.

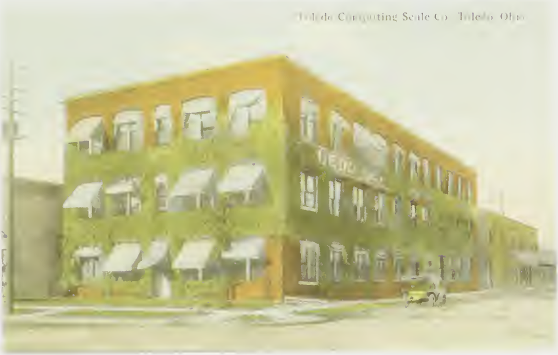
Which scale is this? Was it used in one of the trials? Was it one of the scales hidden from Toledo? There is no way to know, but clearly and crudely scratched into the back are the letters T Z P. Is this one of the three later scales Thomas Zenas Phinney built out of his father's spare parts?

Figure 9. The letters TZP are scratched into the back of the scale's stem which measures 2" by 7¾".

Old Advert

This old 3½ by 5" postcard dates from the early 1900s and is a picture of the Toledo Computing Scale Company in Toledo, Ohio. Since this was in the very early days of Toledo's existence, this factory was probably the only one in use at the time.

Bill Berning Collection.



What a Way to Start a Century

BY JOHN LOUND

'Twas just another Christmas tale ...or at least, that was what it seemed like, for just as we were beginning to think of Christmas cards and presents, what should fall into my possession but one of the first computing scales ever to be used in England. See Figure 1a and 1b. As it happens, this particular one was probably used in the USA before our Board of Trade deemed it to be good enough for us!

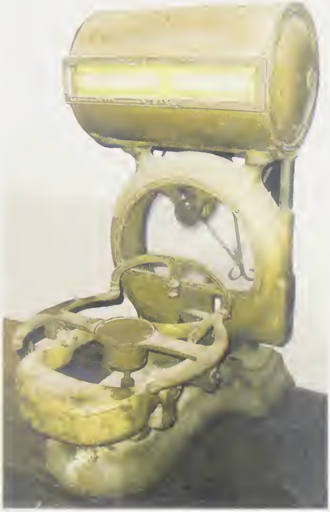
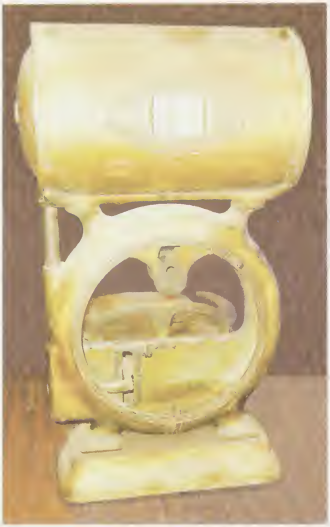


Figure 1a & 1b. The wreck showing little potential from either the Vendors or the Customer's side, with all four glass panels missing or broken. The missing goods plate will be very difficult to replace in the UK.



I am speaking of the great Toledo "Honest Weight" price computing automatic scale, invented in America, and used there from 1901. The Toledo Company caused near riots in some States by publicly labelling all competitors "crooks" because they were selling unreliable spring-type scales.[1]

There are many stories, most dating from 1905 onwards, about the introduction of the Toledo to Britain, as each new model was denied the Board of Trade certificate essential to the scale's retail use in this country. See Figure 3a & 3b. They may be right, but what I can say for certain is that when Henry Theobald, the Toledo Managing Director, came on a European tour in 1909, his visit to Avery's in Birmingham impressed him so much that within six months an agreement had been reached, and Mr. L. G. Wetzel, an expert Toledo engineer, was sent over for nine months to help W&T [Avery] to get started on computing scales, and by the end of 1909, the new "Avery-Toledo" scales were being sold.[2]

This was great news for Avery's, of course - and even better news for thousands of butchers! Instead of juggling with sets of brass bell weights from 14 lb to 1 oz to calculate that piece of beef you wanted for your Sunday lunch - weighing 3 lb 5¾ oz at 1/7d per lb - the butcher could now put the meat on the scale's goods plate (no weights needed) and the price and weight were shown there for both you and the butcher to see, hence the term "Honest Weight". But back to my acquisition.

Condition? Well, diplomatically, I would say "Not very good" ie. no goods plate, and glass on both front

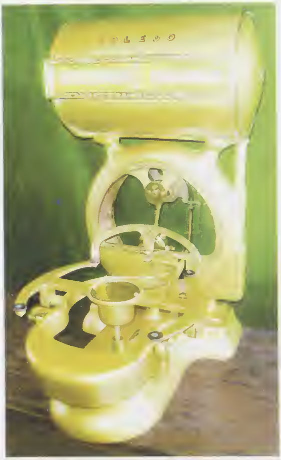
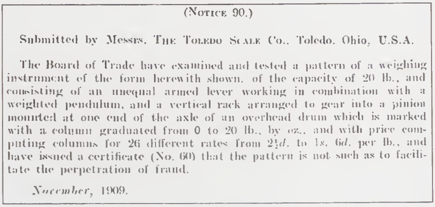


Figure 2. → Shows work in progress. Note the offset lever connection showing where the steel shaft (rusted away) passes through the lever end to join the rack and pinion unit on assembly.

covers broken or non-existent. The paintwork was peeling, with rust spots showing through many layers of dirt. In addition, a large dent in the top of the barrel was causing the chart to catch and scrape, and although the entire cam mechanism was lying in the base of the body, the centre was broken and both agate bearings were missing, as was the connecting mechanism between the levers and the headwork; this was later found to have rusted away along with the cam ribbons. See Figure 1.



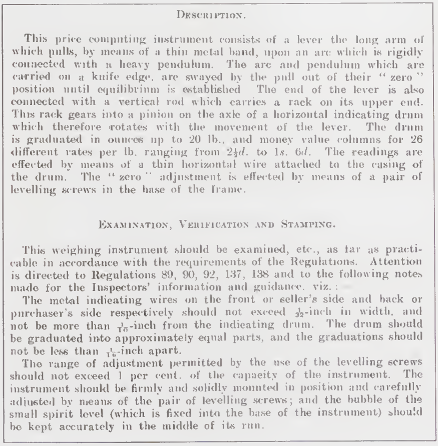
(NOTICE 90.)

Submitted by Messrs. THE TOLEDO SCALE CO., Toledo, Ohio, U.S.A.

The Board of Trade have examined and tested a pattern of a weighing instrument of the form herewith shown, of the capacity of 20 lb., and consisting of an unequal armed lever working in combination with a weighted pendulum, and a vertical rack arranged to gear into a pinion mounted at one end of the axle of an overhead drum which is marked with a column graduated from 0 to 20 lb., by oz., and with price computing columns for 26 different rates from 2½*d.* to 1*s.* 6*d.* per lb., and have issued a certificate (No. 60) that the pattern is not such as to facilitate the perpetration of fraud.

November, 1909.

Figure 3a & 3b. ↗ ↗ The first UK approval of the Honest Weight in 1909. The comment "as far as practical in accordance with the requirements of the Regulations" showed that the regulations had not been formulated to cover such novel ideas!



DESCRIPTION.

This price computing instrument consists of a lever the long arm of which pulls, by means of a thin metal band, upon an arc which is rigidly connected with a heavy pendulum. The arc and pendulum which are carried on a knife edge, are swayed by the pull out of their "zero" position until equilibrium is established The end of the lever is also connected with a vertical rod which carries a rack on its upper end. This rack gears into a pinion on the axle of a horizontal indicating drum which therefore rotates with the movement of the lever. The drum is graduated in ounces up to 20 lb., and money value columns for 26 different rates per lb. ranging from 2½*d.* to 1*s.* 6*d.* The readings are effected by means of a thin horizontal wire attached to the casing of the drum. The "zero" adjustment is effected by means of a pair of levelling screws in the base of the frame.

EXAMINATION, VERIFICATION AND STAMPING.

This weighing instrument should be examined, etc., as far as practicable in accordance with the requirements of the Regulations. Attention is directed to Regulations 89, 90, 92, 137, 138 and to the following notes made for the Inspectors' information and guidance, viz.:

The metal indicating wires on the front or seller's side and back or purchaser's side respectively should not exceed $\frac{1}{32}$-inch in width, and not be more than $\frac{1}{16}$-inch from the indicating drum. The drum should be graduated into approximately equal parts, and the graduations should not be less than $\frac{1}{16}$-inch apart.

The range of adjustment permitted by the use of the levelling screws should not exceed 1 per cent. of the capacity of the instrument. The instrument should be firmly and solidly mounted in position and carefully adjusted by means of the pair of levelling screws; and the bubble of the small spirit level (which is fixed into the base of the instrument) should be kept accurately in the middle of its run.

When family and friends saw this, we were soon back to Christmas terminology, with a few muttered *Crackers* or *Absolutely crackers* along with a few others. To this onslaught I could only lamely reply, *When you reach the age of four score years and six, you need a little more than gardening and bowls - and this little project could keep me going for six months!*

So, with a little help to manipulate my Toledo into central position on a walk-round bench in the garage, work commenced with 'Plusgas' and blowtorch etc, to strip it down completely. Brass bezels and caps (most were black) were all removed and submerged in a horological mixture for a first dip. Both levers were removed, and a borrowed suction-type car-dent remover was successful in taking much of the dent out of the top cover, certainly enough to allow the chart the necessary clearance.

Replacing the missing goods plate, which had seemed a major problem, proved surprisingly easy. I knew someone who had

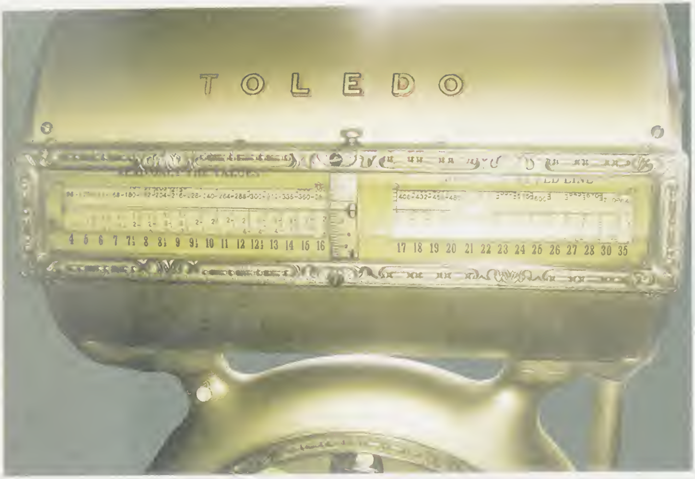


Figure 4. Showing the vendor's read-out on the rolling dial of this American weighing instrument, (prior to final adjustment) showing actual price per pound in the centre and the price per pound either side. Prices shown are 4 to 35 cents. Instant read-out!

plates, and in no time I found one which fitted perfectly, even down to the exactly-placed small retaining groove. See Figure 6b. It was then time to commence the search of the Harrogate area - not for replacements for the missing parts, but for materials to make them. Most were eventually found, but steel rods of the correct gauge and length required for the connecting mechanism proved an almost hopeless task, until the ladies in our local knitting shop came to the rescue with the exact item from their amazing range of steel knitting needles!

I have to admit that I did have some reservations, especially when I realised that the last time I actually did any repairs was in 1955, when a milk weigher, an automatic flour packer, as well as the usual beams, counter and coal machines were, after repair, put up for stamping in my name. It was later that year when I moved on to the supervisory and management side of the business.

However, reservations were overcome, and as things progressed the problems gradually became enjoyable, and the job began to be an obsession - so much so that I even started to look forward to visits from my erstwhile critics. It was also pointed out to me that my prediction of six months had turned out to be six weeks; this can be verified by Dorothy, my wife, who is already wondering why other jobs take so long!

I obtained great satisfaction from this restoration, and almost as much from the looks on my friends' faces! However, what amused me most was that at my age, when remembering anything, even what happened last week, has become almost an art form, it soon became apparent that old Scalies may forget a lot, but never how to tackle repairs!

And so, folks, what am I going to do with it?

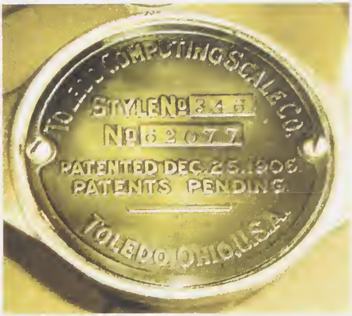


Figure 5. The plaque reading TOLEDO COMPUTING SCALE CO. STYLE No. 346, No 62077. PATENTED DEC 25, 1906. PATENTS PENDING. TOLEDO, OHIO, USA.

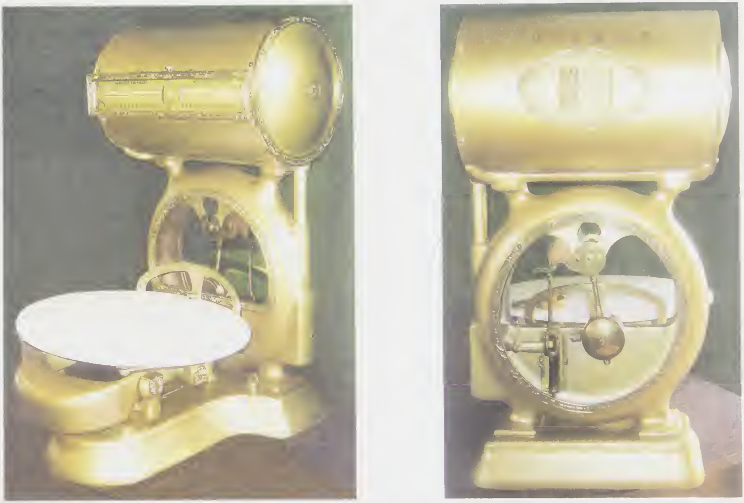


Figure 6a & 6b. Showing the Honest Weight in its fully restored condition, from the Vendor's and the Customer's side. It weighs reasonably well considering its age.

Well, being able to bring the old girl back to life is enough for now; I feel it is quite an honour to own a piece of history which made such an impact on both the weighing machine and retail trade of this country at the onset of the twentieth century. I have two books which go with the scale, a complete history of the Toledo Scale Company, and the Toledo "Instructions for Salesmen". (See next article.) The only other example of this scale I've seen is in the Avery Museum, and that one is probably of the type accepted by the Board of Trade in 1909. I don't think I'll put mine up for stamping this week, though as the range on the computing chart reads 4 to 35 cents per lb - meat was a trifle cheaper in the USA in those days!

Notes & References:

1. Terry, R, *Honest Weight, the Story of the Toledo Scale Company*, pub Xlibris Corp, ISBN 0-7388-1331-1
2. As note 1.

Author's Biography:

John Lound was for 35 years the Northern Area Manager of the Wholesale Cooperative Scales Department for Sales & Service, (this after 15 years as a Service Adjuster - a rather posh term for a scales repairer!) He, with the help of one of his depot managers, Peter Jackson, having like interests, between them built up a large collection at Leeds Depot, after saving many very old and interesting scales from the scrap-heap. Just prior to their retirements, most of it was presented to the Museum of Science & Industry in Manchester where, although it was received with gratitude, as far as is known - only a very small part of it has ever been shown to the general public. John has also been a member of ISASC since January 1979.

A Demonstration of the Latest Improved Toledo Cylinder Scale[1]

MR. MERCHANT: Your scale determines how much you get for your goods. Your average net profit is hardly more than five percent. Five percent. of sixteen ounces is four-fifths of an ounce. On the average, your net profit is in the last ounce of the pound. You can be robbed of a large part of the ounce—your profit—by an inaccurate scale. *

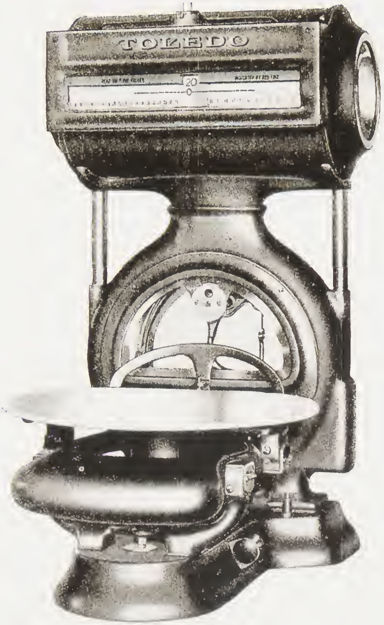
Because weighing *is* the most important transaction that takes place in your store, you should be thoroughly familiar with the real mechanism of the scale you use. When considering any scale, look beyond the finish, although the attractiveness of the exterior is of course important. Strip the scale, if need be, of casing ends, mirrors, scrolls, enclosures and what not, in order to see its "real insides."

Toledo scales are built so that the working parts can be easily seen by anyone. We do not fear to exhibit the mechanical construction of our scales before sale and afterward. We welcome comparison. When considering the purchase of any scale, call in a friend who is a mechanic. Ask his opinion as to the principle and construction of the scale. You are entitled to know that it is built to be accurate, and to remain accurate, to the slightest fraction of an ounce.

The Principle of Weighing

FIRST, in the order of importance, is the principle of construction. No device can be more reliable than the principle upon which it operates. It is true that certain features of the computing part of the Toledo make it greatly to be desired over the computing part of any other scale, but without reference to these features you will admit that the Toledo computing chart is *at least* as desirable as the chart in the spring scale. So disregard the computing chart for the moment and consider principle alone.

Now (*stepping around to the customer's side of the scale*) you have a full view of the pendulum of the Toledo. Note that when I put this one-pound test weight on the scale, the pendulum moves to a certain point and stops. When I put on another one-pound test weight it moves to another certain point and stops, and so on, to the full capacity of the scale.



Toledo No. 383

You could paste a piece of paper on the glass covering of the pendulum housing, and mark on it the point at which the center of the pendulum stops as each of these weights is placed on the scale. Thereafter, this pendulum would stop with its center exactly at the same marks, according to the weight placed on the scale, because the pendulum of the Toledo is not affected by changes in temperature, and its line of travel always is the same. Remove the computing chart from the Toledo, and you still could have an accurate scale, with automatic weight indication.

Notes:

1. Toledo *Instructions for Salesmen.*

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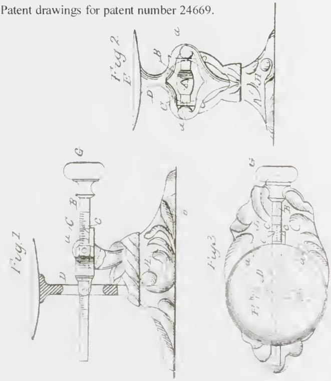
*Note: An audit of the old scale should precede the demonstration of the Toledo, in which case use the actual figures of loss.

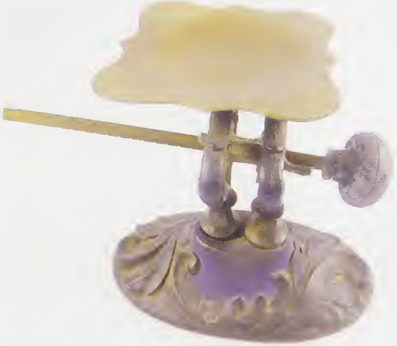
Strange's Postal Bismar

BY JAN BERNING

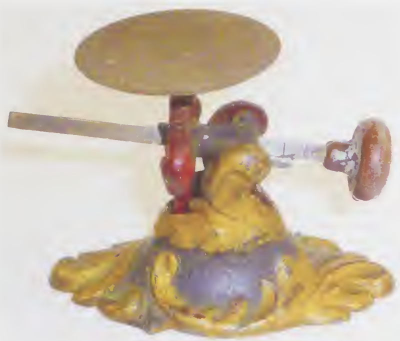
Joseph W. Strange of Bangor, Maine held 11 patents for various handy implements including an improved steam boiler and a carding machine while living in Taunton, Massachusetts from 1836 to 1847. He then moved to Bangor, Maine where he received patents for calipers, saws, a pencil sharpener, a ship's steering wheel, a sewing machine shuttle and best of all a scale.

Patent drawings for patent number 24669.





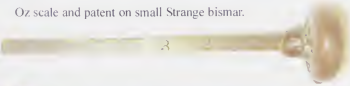
The large version of Strange's postal bismar measures 4" tall and has a 10 oz by $^{1}/_{2}$ oz capacity on one side and another side marked with unknown units. The ornate brass letter plate is marked in its center J.W. Strange Mfg., Bangor, Maine. The base of both scales is made from cast iron and the beams are brass.



The small version of this postal bismar has a 4 ounce capacity by $^{1}/_{4}$ oz. on one beam side and 2 troy ounces by 10ths on the other. It measures 4" long by $2^{7}/_{8}$" high with a $2^{15}/_{16}$" diameter plate. It is made to weigh both letters and coins. The patent date is stamped into the beam end.

Strange was issued patent number 24,669 on July 5, 1859, for an ornate postal scale bismar that he describes in part thusly: *The beam, B, is triangular...and it is fitted into the socket, C, in such a manner that it can be turned over in the same, so that either one of its sides are marked with different indications or scales one of which may represent the troy weight, another one the avoirdupois, and still another the medicinal weight so that the weight of a substance placed on the platform can be read off in either one or the other of the above named indications.*

Oz scale and patent on small Strange bismar.



Troy oz graduations on small Strange bismar.

Number 132 November 2012

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

A Balanced View

I hope you were able to attend one of the regional meetings. In your recent mail you should have received a request for support for the Endowment and Benefactor programs for ISASC. These programs are important in maintaining our organization, so please consider supporting them generously.

In addition another letter should have arrived—the dues renewal for next year. Please take care of your dues in a timely manner as it helps Shirley Schmidt, our Membership Vice President, manage the process without the extra work of reminders. We continue to offer multi-year memberships and payment via PayPal for your convenience.

Round Up on the Regionals

The regional meetings are great for members who are not able to attend the convention and for those of us who just enjoy more time sharing our hobby with fellow scale collectors. We especially want to thank the members who volunteered to do the recaps. For more go to www.isasc.org and click on Events/Regional Meetings. All three of these groups are planning events for next year with locations and dates to be announced.

Jan Berning sent the following summary of the **Midwest Weigh-In**:

Four new venues were available for exploration by the 7 scalies who attended the seventh annual “Weigh-In” in Marion, Iowa. At the home of Harry and Jane Hawley, we were able to roam at will to see Jane’s miniature and doll house collections which featured a few toy scales hidden in some of the rooms for us to espy.

In areas throughout the home were some of the many scales in Harry's collection. The collection leans heavily towards trade and shop scales. He does have a rare Weaver scale that was prominently displayed on the dining table for all to see. In the garage we were treated to several show and tell items arranged on tables.

Lunch was prepared by Jane who baked a delicious ham with all the trimmings and a variety of fresh fruit pies. No complaints were heard and no one left hungry. After lunch, there was a stopover at the new offices of Shaw Electrical Contractor, LTD, where member Don Shaw is in the process of getting his scale collection displayed after a recent move.

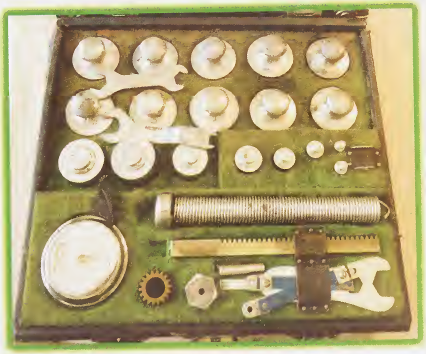
A lovely afternoon drive through Iowa farm country brought the tour group to the Hawley family farm. Located on the property are two buildings housing the remainder of Harry's scale collection. Also on display are his hit-and-miss engines, tractors and the restored antique cars that are the pièce de résistance of Harry's collections. Everyone enjoyed the day and thanked Harry and Jane for hosting this year's gathering. The group plans on getting together next year, although location and date will be decided at a later time.

Steve Beare dispatched this account of the **Mid-Atlantic Scale Summit**:

Thirteen avid scalies, including three first timers, got together at the home of Jerry and Mary Katz in Downingtown, PA. Because of the political season, it may be fun to guess where attendees came from. Scale enthusiasts came from the following five states that claim residency of the Vice President of the US while in office:

1. State with the most VPs, eleven
2. State with the current VP
3. State with the only VP who resigned from criminal charges
4. State with the VP who served under James Polk

5. State with the VP who wrote the Declaration of Independence **



Representing Maryland were attendees Ann and Barry Lubin and Kathy and Steve Barnett. Ann and Kurt Beyreis drove in from Virginia. Karen and Steve Beare lay claim to Delaware. Arline and Bill Jacobson are proud residents of New York. Hosts Mary and Jerry Katz and Ron Van Anda proclaim Pennsylvania as their home state.

The attendees brought several interesting items to share. There was a Troemner gold planchet scale used in the US mint. For those who might be wondering what a planchet is, it is a flat disk of metal ready for stamping as a coin.

Also on display was a banker's scale made by Henry Plympton of Boston which was awarded a silver medal for its design at the 1837 Exhibition and Fair of the Massachusetts Charitable Mechanic Association. The judging committee for this scale summed up their report with "the manufacturer deserves high commendation for bringing so difficult an art to so great a degree of perfection".

Jerry showed a set of calibration weights which would have been used by a field representative for the Standard Computing Scale Co. of Detroit. The set is complete, carried in a small worn "suitcase" and dates from about the 1920's. Others brought a boxed apothecary or parts scale and a set of Burmese weights. In the category of "related to scales" Jerry showed a flat iron, also known as a sad iron, with the distinctive Salter logo.

For lunch Mary concocted her locally famous chili. Everyone pitched in by bringing sides and desserts to round out the feast. The food and fellowship were just the ticket, and attendees are looking forward to the ISASC 2013 Convention in Riverside next May.

** (1) New York (2) Delaware (3) Maryland (4) Pennsylvania (5) Virginia

Greg Moss submitted this report from the **Michigan Get-Together**:

The weather was cool, but clear, as seventeen collectors, family and friends got together at the home of Greg and Beverly Moss in Waterford, MI. The travel award went to Bob Jibben, who came in from Minneapolis, but not far behind were Charlie and Dawn Amsbaugh who drove here from Maryland. The old spare-parts scale setting by the driveway was a sure sign that people had found the right house.

As always, it's good to see each other and catch up on what's been happening. And, of course, there are new finds to our collections. Of special interest were a couple of "you've never seen them before" egg scales that Charlie brought. This included an education into the poultry contests that were held around the country, where points were scored based on the weight of the eggs.

As the host, it's always great to have all this experience and knowledge examining your collection and adding information and questions. Here are a few of the unanswered questions for anyone who can contribute to the conversation:

- When was the switch from showing patent dates to showing patent numbers on products? Sometime in the late 1920s or 1930s?
- There are some brass gauges, apparently used to measure force (e.g., 50 grams) for old phone systems. Any retired phone company workers who can help?
- For a National Scale Co. counting scale, when did they switch from the fancy metalwork to a heavy, single column between the platform and the counting-weighing mechanism?

Some people already have their travel reservations for the 2013 convention, and Utz and Shirley Schmidt are planning the next Michigan gathering; so make your plans now!

Rumors from Riverside

We heard some rumors coming out of Riverside, CA, the site of our 2013 convention. There were outrageous stories that we would be staying at a magnificent hotel with a fascinating history harkening back to a grandiose era. There were suspicious reports of Saturday morning presentations given by knowledgeable outside speakers who would tie the history of the local area and technology together as it relates to scales. There were vivid accounts of massive scale collections that we would be able to see. There was excited chatter about a special destination on the Monday field trip that involves outer space. The tension mounted as all these rumors swirled around building up the anticipation. Could it be so? Could they be true? We decided to go directly to the source, our hosts Greg and Judy Hill, to see if they could set the record straight. Well, we now have our confirmation. Greg and Judy have assured us that all these things, and more, are in store for the members who come to the convention in Riverside next May. So remember, it is not too early to start making your plans. See ya there!

Election of Officers

It is time again to ask for your support in voting for the election of officers of ISASC. Please fill out the enclosed ballot and return it in the provided envelope. Mary Anne Murphy is responsible for the Collection Development Committee and oversees the management of the ISASC Collection. She has done an outstanding job as many will attest to after seeing the collection at the Pittsburgh Convention. She has agreed to seek another term as Vice President so she can continue her work in this area. Shirley Schmidt has done an exceptional job as Membership Chairperson since taking over the position in May of 2009. Shirley is standing for reelection for another term. If elected, both Mary Anne and Shirley will serve a term from June 1, 2013 to May 31, 2016.

Meet Our Members

Edward Walech has been a member since 1992 and shares the following with us:

After spending 35 years as an over-the-road trucker, the last several years I have been enjoying retirement with my wife. Recently, at 96 she has moved into nursing home care. At 91, I continue to be active, and I enjoy fishing on the Mississippi River near my home in Prairie De Chien, WI. I often take friends out fishing with me on my outboard motor boat.

My wife and I grew up in Dubuque, IA, and were married on December 12,

1942. In December we will have been married for 70 years. We took a bus to Cedar Rapids, IA, to get married, and when we arrived, we found out we knew the judge. On the way home, we sat behind the driver to stay warm as the only heater on the bus was for the driver. In 1943, I entered the army. When we decided to build a home, my father-in-law loaned us the money at 2.5 percent interest. I worked for H and W Motor Express my whole career.

In 1982, we left our home in Dubuque and moved to a trailer we had in Harper Ferry, IA. Then in June of 1986 we moved to Prairie Du Chien, WI. I had been collecting clocks, and at one time I had about sixty. My other interest in collecting was cash registers, owning about 30 at one time, and of course, searching for various scales. I worked at restoring the things I collected, bringing them back close to the original condition. My wife and I enjoyed traveling and searching for our collections. Several things from my collection have been donated to the local museum.

Richard Stimpson joined ISASC in 2008. He tells how a family connection is the basis of his interest in scales:

My home is in Freeland, MI, and I am a nephew of Walter Stimpson of Stimpson Scales, the owner of many patents for scales. As a youth, I was only aware that my uncle worked with scales for a living. We contacted the Scale Society (ISASC) and asked about information on Stimpson Scales. Soon a fellow named Utz Schmidt contacted us, and he knew all about our family history in the scale business. Utz and Greg Moss have provided us with a wealth of information on the scale business.

I have attended some of the Michigan Scale meetings and enjoyed the opportunity to learn about our family business.

My career has been in the computer end of heating and air conditioning. Other areas of work have been in electronics, radio, TV, alarm systems and automated machinery. .

I had heard that my Uncle Walter had gained and lost a fortune in scales. About 20 years ago I found a Stimpson Scale, and on a return visit to the shop, I bought my first Stimpson scale. My brother and I went to see Utz and Shirley Schmidt's collection of scales. Since then I have started looking for more Stimpson scales, searching antique shops and eBay. I now have about 20 Stimpson scales and a coffee grinder.

Fredrich Stimpson is Richard's brother and although not an official member of ISASC he relates his interest in scales:

I was named after my grandfather Fredrick Stimpson who was a brother of Walter Stimpson, inventor of Stimpson Scales.

In college I studied mechanical engineering and worked for General Motors and Delphi Motors, a supplier of auto parts. After my brother started collecting scales, I became interested. Utz found a Stimpson scale, and I drove to Princeton, NJ, to pick it up—my only scale. I attended the recent Michigan Scale Collectors meeting. My hobby has been painting wildlife and landscape for much of my life. My brothers and I have a common bond through our interest in hunting.

New Policy for Membership Renewal

The following is from our Membership Chair, Shirley Schmidt:

Well, by now you should have received your annual renewal letter. I hope that you don't put it some place for safe keeping and then forget where that safe place is. I know all about that, because I do it a lot!

We value all of our members and sincerely hope you plan to continue your membership. In the past I, as well as several other board members, spent a lot of time and effort emailing and calling members who did not renew by the stated deadline of December 31st. In view of this we are asking each of you who plan to renew to do so by the end of the year. In the last few years we purposely have sent out the letters earlier to give everyone plenty of time to respond.

As much as we dislike losing any member, we understand that sometimes it is necessary to drop your membership. If you plan to do so, please give us the courtesy of letting us know. Your decision to resign will be accepted without trying to persuade you to do otherwise. We simply would like to hear directly from you so that we know you received the renewal notice and made your decision.

We also understand that occasionally with the extra activity at the end of the year sometimes people do forget to send in their dues or misplace the renewal form. If this is the case we will send you ONE reminder email after the first of the year. If we do not hear back from you, we will assume that you do not plan on renewing. At that point you will be removed from the mailing list. This is certainly something we do not want to do, if you plan to stay a member. So please send in your membership before the end of the year, so that you will continue to enjoy all the benefits of belonging to ISASC.

In Memoriam

William (Bill) Everett joined ISASC in 1984. He was an avid collector and strong supporter of the Society often attending the annual convention. Over the years Bill became concerned about what would happen to his scales and those of other members as they grew older and were no longer able to keep their collections. He wanted to preserve these scales for the benefit of future generations. Motivated by this purpose, Bill challenged the Society to conceive a long-term plan with the ultimate goal of having a museum. He donated his entire collection and gave a generous financial grant to get the project started. The ISASC Collection we see today in Pittsburgh is the result of his vision. Bill passed away on July 23, 2012. As we work towards the ultimate goal of a public scale display, we are deeply indebted to Bill for his early leadership in this area. He leaves a legacy to the world of scale collecting that we are committed to carry on.

Longtime member Larry A. Matson, Sr., passed away on Oct 3, 2012. Larry joined ISASC in 1997. His interest in scales was also his life work as he was a Mettler/Toledo Master Scale Technician retiring after thirty-eight years in the business. He enjoyed sharing his love and passion for scales with his friend and fellow ISASC member Ned Schaeffer. We send our deepest condolences to his wife Kathy and family.

We are deeply sorry to let you know that our longtime webmaster Mike Souders passed away on Oct 28, 2012. Mike was tapped to create our original website in 2000 and remained our webmaster until the summer of 2011 when he resigned for health reasons. In 2010 he was the technical force behind the redesign of our website and responsible for the great graphics we now have. He left us in excellent hands when he recruited his sister Susan Phillips to take over as webmaster. We extend our deepest sympathy to Susan and Mike's entire family.

Welcome New Members

We welcome our newest members. We hope to meet you in person at one of our meetings. Please don't hesitate to contact any of the members should you have questions.

James DeGidio	Cambridge, WI
Tom & Lynne Licouris	Fresno, CA
Madhu Divakaran	India
Ori Wagner	Israel
Roberto Diaz Castelar	Argentina

Collector's Corner—Sell, Buy and Trade

Bob Jibben would like to purchase an original W. & L.E. Gurley Sealer's Manual circa 1900. Please contact him by phone at 612-925-1386 or by email at rmjibben@hotmail.com if you can help.

As we complete another year, there have been many successful activities in the Society. I hope you were able to attend some of them. If not, try to make plans for this next year to participate. I encourage you to check out www.isasc.org where there is always new information. Make an effort to contact another member in your area and make a new friend.

Until next time,